

Royal Vendors'

ELECTROMECHANICAL VENDOR

Service & Parts Manual

Includes Major Parts Explanation, Vendor Installation, Troubleshooting Tips, and
Exploded Parts View with Part Numbers



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931119 - 6-select Vendors (6 Wide Col. / 0 Narrow Col.)
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931097 - 7-select Vendors (6 Wide Col. / 1 Narrow Col.)
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Safety Segment

ROYAL VENDORS' COMMITMENT TO SAFETY

Royal Vendors is committed to safety with all of our product designs. We are committed to notifying the user of a possible danger involving the improper handling or maintenance of our venders. The servicing of any electrical or mechanical device involves **potential dangers**, both to those servicing the equipment and to users of the equipment. These dangers can occur because of improper maintenance or usage. The purpose of this safety segment is to alert everyone servicing Royal equipment of potentially dangerous areas, and to provide **basic safety guidelines** for proper upkeep.

The service manual contains various **warnings** that should be carefully read to minimize the risk of personal injury. This manual also contains service information to insure that proper methods are followed to avoid damaging the vender or making it unsafe. It is also important to understand these **warnings** provide general guidance only. Royal could not possibly know, evaluate, or advise of all of the conceivable ways in which service might be done. Consequently, Royal cannot predict all of the possible dangerous results. These outlined safety precautions are the basis for an effective safety program. Use these safety measures, along with the service bulletins, helpful hints and product specification sheets, when installing or servicing Royal equipment.

We recommend that persons servicing our equipment maintain a similar commitment to safety. **Only personnel properly trained should have access to the interior of the vender.** This will minimize the potential dangers that are inherent in electrical and mechanical devices. Royal has no control over the vender once it leaves the premises. It is the owner or lessor's responsibility to maintain the vender in a safe condition. See installation insert located in the coin box of a new vender for proper installation procedures and refer to the service manual for recommended maintenance procedures. If you have any questions, please contact the Technical Services Department at 1.800.931.9214.

SAFETY REGULATIONS

- Read the safety segment before installation or service.
- Test for proper grounding before installing to reduce the risk of electrical shock and fire.
- Turn off or disconnect power cord from wall outlet before servicing.
- Only fully trained service technicians should service vender when vender has power.
- Remove any product before moving a vender.
- Use appropriate equipment when moving a vender.
- Always wear eye protection, and protect your hands, face, and body when working near the refrigeration system.
- Use only authorized replacement parts.
- Be aware of inherent dangers in rocking or tipping a vender.

SECTION I: ELECTRICAL HAZARDS GENERAL ADVICE

Careless or improper handling of electrical circuits can result in injury or death. Anyone installing, repairing, loading, opening, or otherwise servicing a vender should be aware of this precaution. Apply all of the normal precautions when handling electrical circuits, such as:

- Refrigeration servicing to be performed by qualified personnel only.
- Unplug the vender before servicing.
- Replace electrical cords if there is any evidence of fraying or other damage.
- Keep all protective covers and ground wires in place.
- Plug equipment into outlets that are properly grounded and polarized (where applicable), and protected with fuses or circuit breakers of the correct size.
- All electrical connections must be dry and free of moisture before applying power.

WARNING:

**ALWAYS TEST TO VERIFY PROPER GROUNDING PRIOR TO INSTALLATION IN ORDER TO
REDUCE THE RISK OF ELECTRICAL SHOCK AND FIRE.**

SECTION II: ELECTRICAL HAZARDS

A. Servicing with Power Off

For maximum safety, unplug the power cord from the wall outlet before opening the vender door. This will remove power from the equipment and avoid electrical hazards. Service personnel should remain aware of possible hazards from hot components although electrical power is off.

B. Servicing with Power On

Some service situations may require access with power on. Only fully qualified service technicians should perform power-on servicing. Particular caution is required in servicing assemblies that combine electrical power and mechanical movement. Sudden movement (to escape mechanical action) can result in contact with live circuits and vice versa. It is therefore important to maintain maximum clearances from both moving parts and live circuits when servicing.

WARNINGS:

- 1. ONLY FULLY TRAINED PERSONNEL SHOULD ACCOMPLISH "POWER-ON" SERVICING.
SUCH SERVICE BY UNQUALIFIED INDIVIDUALS CAN BE DANGEROUS.**
- 2. LIGHTING CIRCUITS CAN BE HAZARDOUS. ALWAYS DISCONNECT FROM POWER SUPPLY
BEFORE REPLACING A BULB OR SERVICING THE VENDER IN THAT AREA.**
- 3. NEVER USE A HOSE, PRESSURE WASHER OR ANY CLEANING METHOD THAT COULD WET
ELECTRICAL COMPONENTS. SEE CLEANING SECTION OF MANUAL FOR SUGGESTED CLEAN-
ING METHODS. IF WATER CONTAMINATION OF ELECTRICAL COMPONENTS IS SUSPECTED,
USE QUALIFIED ELECTRICAL TESTING EQUIPMENT AND TEST METHODS TO ASSURE THAT
VENDER IS NOT A HAZARD BEFORE APPLYING POWER FOR ANY REASON.**

SECTION 1 GENERAL INFORMATION

Introduction

Thank you for the purchase of your "new" Royal "ELECTRO-MECHANICAL" can / bottle vendor. We are sure you will be pleased with it, as it is one of the most reliable vendors in the marketplace today.

This manual contains installation, operation and service information for your Royal can / bottle "electro-mechanical" vendor. To become familiar with your "new" vendor it is suggested that this manual be read in its entirety.

At **ROYAL VENDORS**, our objective is not only to provide you with a strong, reliable vendor, using only the highest quality, environmentally safe materials, but is also to provide you with first class service in a timely and cost-effective manner.

Vendor Identification

Unit Markings - Your vendor can be identified by the serial plate which is mounted on the outer left side of the vendor's main door (fig.1a). The serial plate gives valuable information which is necessary when ordering parts or calling for technical service.

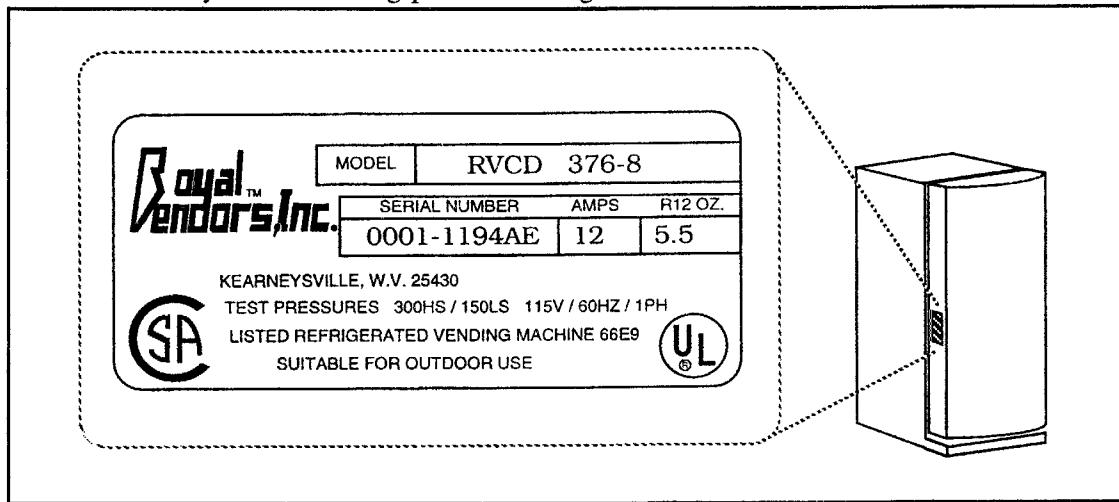


Figure 1a

Common Models:

RVCD = ROYAL VENDORS COLD DRINK (ALL GENERIC MODELS)

RVCC = ROYAL VENDORS COCA-COLA

RVMC = ROYAL VENDORS MAGNUM CURVE (PEPSI-COLA)

RVDP = ROYAL VENDORS DR. PEPPER

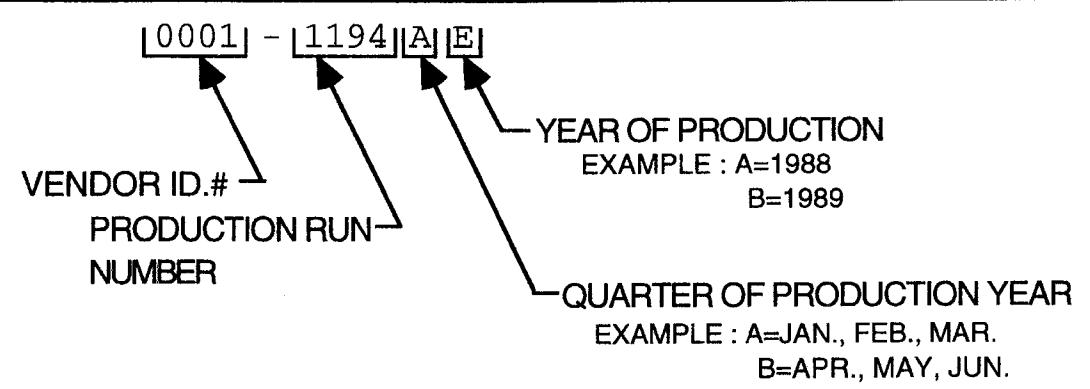
Model Numbers: (example)

376-8 = Your vendor will hold a maximum of three hundred and seventy six 12 oz. cans (In the vending mechanism), and has eight selections.

Serial Numbers:

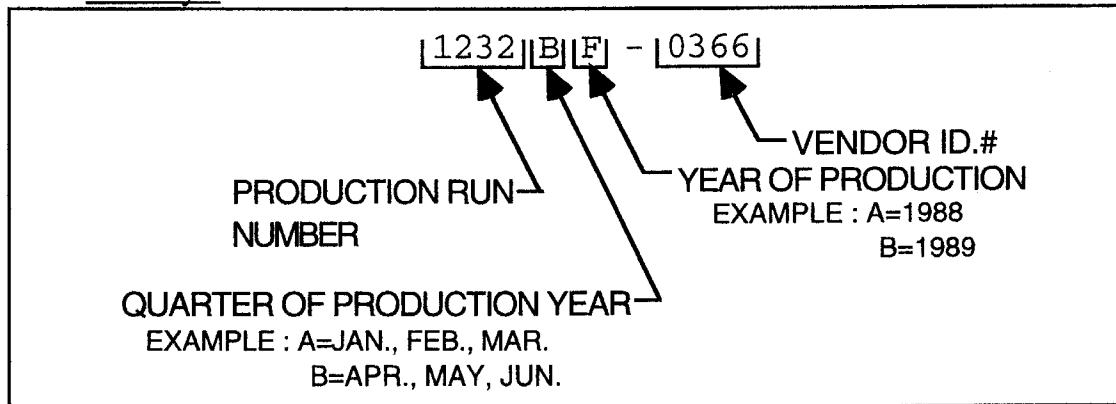
The vendor's serial is very important when service or parts order information is requested. There are currently two styles of serial numbers in use, use the illustrations on the following page to find the style of serial number that matches yours.

Old Style:



OR

New Style:



Refrigeration:

Your vendor's refrigeration system can be identified by noting the refrigeration serial plate which is mounted to the base plate of your refrigeration system (fig.1b). This also gives information which is necessary when ordering a replacement refrigeration unit, or when calling for service help concerning one.

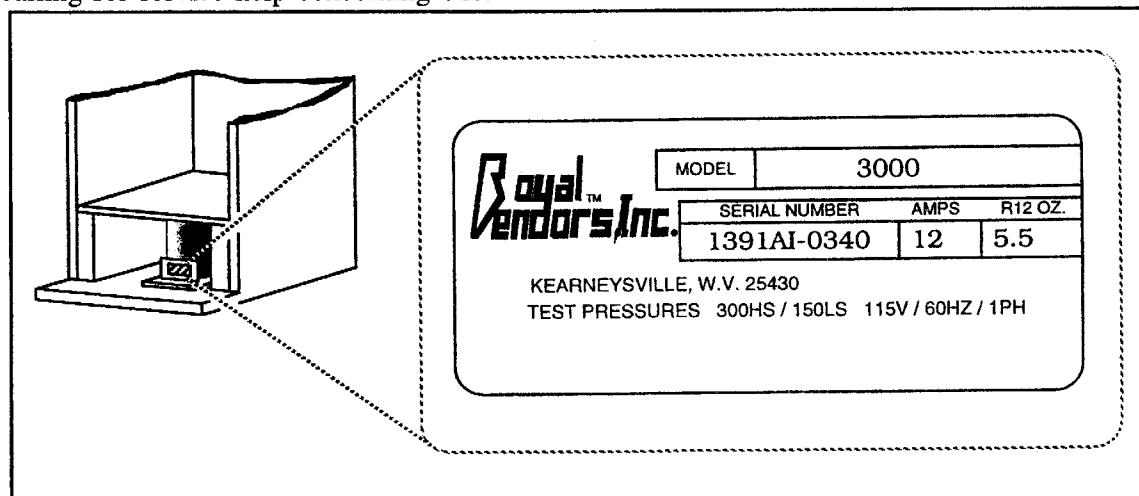


Figure 1b

Warranty

- The vend motors are warranted for five years and three months. The refrigeration system consisting of the fan motors, compressor, evaporator, clean-flo condenser and the refrigerant tubing is warranted for five years and three months. All other parts are warranted for one year and three months with the exception of light bulbs and finish.
- Royal Vendors' obligation under warranty is limited to repairing or replacing subject part at our option, when upon examination it was determined by Royal Vendors to be defective. Royal Vendors will pay shipping charges on all parts covered under this warranty when transportation has been made the most economical way
- The warranty is void when a cabinet or any part has been subject to misuse, alteration without proper authorization, accident, or damage caused by fire, flood, transportation, civil disorder, or act of God.

Credit and Replacement Policy

Any item still under warranty will be replaced or exchanged free of charge if the proper procedure is followed:

1. Returning item for exchange: On a packing slip give complete name and address and a reason for returning, along with a cabinet serial number.
2. Replacement items can be ordered in advance and sent back to us after the new part is received. If so, once new part is received, return old part with copy of packing slip and we will give credit for part and shipping.
3. We will only credit for shipping in the most economical way. We will not credit any next day or second day shipment.

notes:

SECTION 2

VENDOR COMPONENT EXPLANATION

Vend Relay (see figure 2a)

The vend relay is an electrical component which is composed of a coil and three switches. When the customer inserts enough money to establish a credit the vend relay's coil is energized (by the coin mechanism), it pulls in, this action simultaneously pulls each of the three switches contacts from the normally closed (N.C.) position to the normally open (N.O.) position.

The vend relay is approximately located in the middle of the vendor's main door and is plugged into the "vend relay receptacle".(For more information please reference section 4 "points of interest, vend relay receptacle")

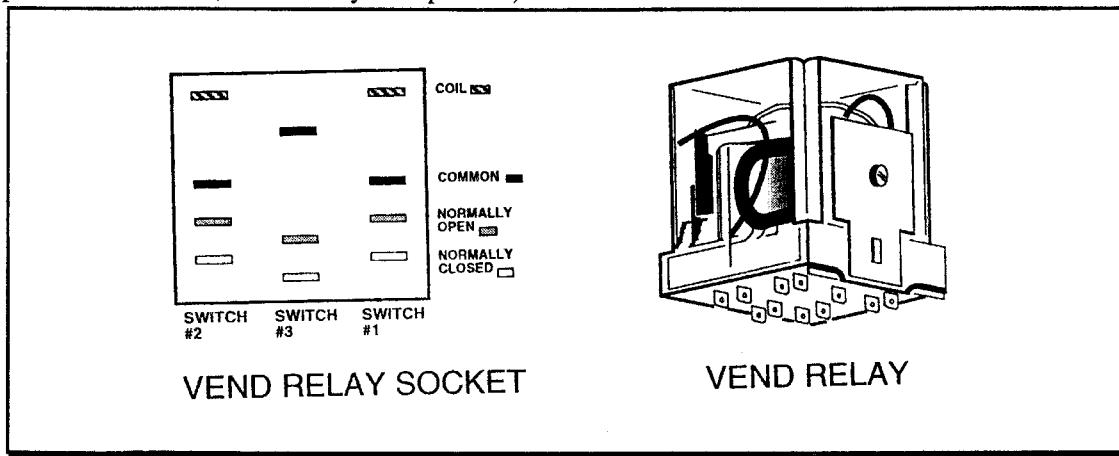


Figure 2a

The VEND RELAY controls the following functions: (see Figure 2b)

- Helps to allow the coin mechanism to accept coins in attempt to establish a credit.
- Directly discontinues further coin acceptance once a credit is established.
- Energizes select panel through the bottom select switch upon establishing a credit.
- Removes power from the select panel when credit is canceled.

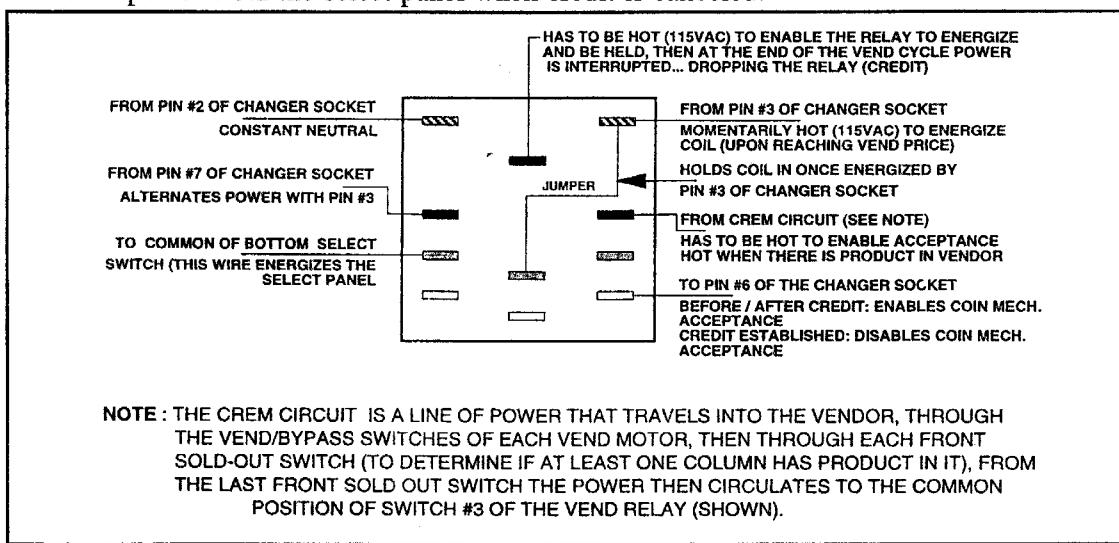


Figure 2b

Sequence Relay Coil (RVCC models only)

The sequence relay coil is located in the upper left section of the vendor's main door and is responsible for controlling product delivery out of columns 1 and 2. When the select panel is energized during credit setup, the power will travel out of the top select switch and to the sequence relay coil to energize it. At this stage you will hear it pulse.

There is a miniature switch that is connected to the sequence relay coil. As the coil energized each time a credit is established it toggles the switch. When selection #1 is chosen the power will travel from the select switch to the sequence relay switch at the common position.

Depending on which position the switch is in will influence which column is vend from. If a vend is made from column #1 the next credit that is established will sequence the switch so that if selection #1 is chosen the vend will come from column #2.

Coin Mechanism

The coin mechanism determines the value and validity of each coin that is inserted into the vendor. Once the vend price is achieved, the coin mechanism sends an instantaneous pulse of 115 volts through pin #3 of the coin mechanisms' receptacle to energize the vend relay's "coil" (Refer to "Vend Relay" earlier in this section.). Once the vend relays' coil is energized, the coin mechanisms job is then to power the select panel through pin #7 of the coin mechanism receptacle and initiate coin return.

note: Once the vend relay is energized (vend price is achieved), power is removed from pin #6 of the coin mechanism socket which kills further coin acceptance

Exact Change Condition:

If correct change cannot be made, the coin mechanism will power the correct change indicator lamp through pins #5 (neutral) and #6 (115 volts constant with product in at least [1] column).

Vend Counter Option:

Your Electro-Mechanical vendor comes equipped with a 2-way mate-n-lok socket to be used to power an optional vend counter. The socket is pre wired to the coin mechanism

The following coin mechanisms can be used in your Royal Electro-Mechanical vendor (This list can be found inside the vendor's main door).:

THE FOLLOWING IS A LIST OF COIN MECHANISM MANUFACTURERS AND MODEL NUMBERS OF COIN MECHANISMS INTENDED FOR USE WITH THIS VENDOR. THE VENDOR IS NOT TO BE OPERATED WITHOUT ONE OF THESE COIN MECHANISMS.

COIN ACCEPTORS, INC. MODELS S75 WITH/WITHOUT E FOLLOWED BY 9800A, 9800B, 9800C, 9800D, WITH/WITHOUT ADDITIONAL SUFFIXES. MODELS S75 WITH/WITHOUT E FOLLOWED BY 9400A, 9400B, 9400C, WITH/WITHOUT ADDITIONAL SUFFIXES. MODELS CC300EB200, 9300CC

MARS ELECTRONICS MODELS SP400, SP450, MC5000, MC5800, MC5800D, MC5800D8, TRC6000.

NATIONAL VENDORS MODELS 550, 585, 5250, 5251, 500, 510, 510E, 525B, 525C, 525E, 3000.

ROYAL VENDORS, INC.

Vend Motors

Your "electro-mechanical" vendor is equipped with a vend motor for each column. There are two types of vend motors that may be used in your vendor, these vend motors are not interchangeable.

Wide Column:

A "Wide Column" vend motor assembly can be identified by the linkage arm assembly which is mounted to the rear of the vend motor. The linkage arm is used to drive the vend mechanism's oscillator (1 per wide column) in a "back and forth" motion to deliver product.

note: The vend timing cam for a wide column motor is set differently than a timing cam for a narrow column motor. (For more information please reference section 3 "set-up and installation, Adjustments, Cams and Backspacers".)

Narrow Column:

A narrow column vend motor has a wider motor coil than a wide column vend motor. This is because the motor and rotor must lift the complete column of cans upon re-loading, this requires a stronger vend motor. This motor can be identified by the pin on the rear of the vend motor that drives the vend mechanisms rotor in a "circular" motion to deliver product.

note: The vend timing cam for a narrow column motor is set differently than a timing cam for a wide column motor. (For more information please reference section 3 "Set-Up and Installation, Adjustments, Cams and Backspacers")

Refrigeration System

Compressor:

The compressor motor is a hermetically sealed unit located beneath (outside) the cooling compartment. The compressor is a pump, driven by the compressor motor which draws low pressure vapor (refrigerant) from the evaporator coil, compresses it, and forces it into the condenser under high pressure. The motor is started and controlled by the temperature control.

Starting Relay:

The starting relay is mounted on the side of the compressor housing. The compressor motor has two windings, a start and a run winding. To give the motor torque when it first starts, the starting relay switches in the additional start winding. After the motor gets up to speed the relay opens the start winding and the motor continues using only the run winding.

Thermal Overload:

The thermal overload is a heat sensitive device mounted on the side of the compressor housing. If the compressor motor gets too hot or draws an excessive amount of current, the thermal overload will open, breaking both the start and run circuits of the motor. After the compressor cools to a safe operating temperature, the thermal overload will close allowing the compressor and condenser fan motors to restart.

Condenser:

The condenser coil is located beneath (outside) the cooling compartment next to the compressor. The condenser removes heat from the high pressure vapor discharged from the compressor and condenses it to a high pressure liquid

Condenser Fan Motor:

The condenser fan motor, located beneath the cooling department, is a forced air device that uses outside ambient air to cool the surface of the condenser coil. The condenser fan motor runs while the compressor runs.

Evaporator:

The evaporator coil is located in the cooling compartment. As low pressure liquid passes through the evaporator coil, it absorbs and removes heat from the compartment as it changes to vapor.

Evaporator Fan Motor:

The evaporator fan motor is a forced air device that circulates air throughout the cooling compartment and over the heat exchange surface of the evaporator coil. The evaporator fan motor runs continually.

The condenser and evaporator coils have aluminum fins attached to effectively increase their heat exchange surfaces.

Capillary Tube:

The capillary tube is located in the refrigerant line, between the condenser and evaporator coils. The small diameter tube is used as a metering device to control the flow of liquid refrigerant to the evaporator coil. This creates a low pressure causing the refrigerant to vaporize and absorb heat as it passes through the evaporator.

Drier:

The drier is located in the refrigerant line between the capillary tube and condenser. It traps and removes moisture from the refrigeration system while allowing oil and refrigerant to pass through the system.

Accumulator:

The accumulator is located in the refrigerant line between the evaporator coil and compressor. The accumulator traps any liquid refrigerant which did not vaporize before it reaches the compressor.

Temperature Control:

The adjustable temperature control is responsible for sensing temperature changes in the cooling compartment and starting the compressor motor when the compartment temperature rises above a preset setting.

The temperature control is composed of a control switch that is actuated (opened and closed) by the mechanical movement of a bellows. The bellows is connected to a temperature sensing bulb (located in the cooling compartment) by a small diameter refrigerant tube. The bellows, temperature sensing bulb, and refrigerant tube are filled with refrigerant that react to temperature changes.

When the temperature of the cooling compartment rises, the refrigerant in the sensing bulb expands forcing the bellows to close the temperature control switch. The temperature control switch turns the compressor and condenser motors ON. As the refrigeration cycle cools the compartment, the refrigerant in the sensing bulb contracts allowing the bellows to relax, actuating the temperature control switch to its open position, turning the compressor and condenser motors OFF.

Cooling Compartment:

The cooling compartment is the sealed area of the vendor that holds the product for delivery. This area is designed to allow free flowing air to circulate throughout the product.

The Refrigeration Cycle:

The rising temperature in the cooling compartment heats and expands the refrigerant in the temperature control bulb, expanding the bellows. The expansion of the bellows closes the temperature control switch.

The temperature control switch turns the compressor and condenser fan motor ON.

The compressor circulates refrigerant throughout the system by pulling low pressure refrigerant vapor from the evaporator coil, compressing it and forcing it into the condenser coil.

The condenser aided by the condenser fan motor, removes heat from the refrigerant as it flows through the condenser coil and releases it to the outside environment. The dropping of the refrigerant temperature changes the vapor to liquid.

The capillary tube controls the amount of refrigerant released to the evaporator coil.

The evaporator coil allows the liquid refrigerant to absorb heat from the cooling compartment as it evaporates in the coil.

The falling temperature in the cooling compartment is caused by the continual circulation of refrigerant through the system, removing heat from the cooling compartment and transporting it to the outside environment. When the temperature drops, the refrigerant in the temperature control bulb contracts allowing the bellows to open the temperature control switch.

The temperature control switch turns the compressor and condenser fan motors OFF.

notes:

SECTION 3

SET-UP AND INSTALLATION

Installation

Unpack The Vendor:

Unwrap the vendor and remove padding. Check for any signs of damage. If the vendor is damaged, contact the carrier immediately. They will instruct you as to the procedure for filing a claim.

note: The vendor keys are located in the coin return cup.

Removing the shipping skids:

Separate (split) each section of the skid by inserting either a claw hammer, crow-bar, or similar device into the slot of each section to break apart. Tilt the vendor slightly to remove the separated pieces. See figure 3a.

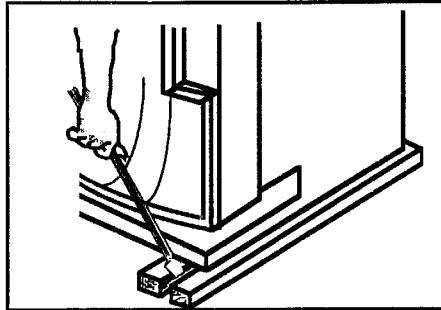


Figure 3a

Placing the Vendor on Location:

When placing the vendor on location allow for a minimum of four inches (4") of space to rear of vendor. This will insure proper ventilation of the refrigeration system. See figure 3b.

Level the Vendor:

Level the vendor by adjusting the four leveling legs on the bottom corners of the vendor. The vendor is level if the door remains stationary when opened to different positions. The four leveling screws must be in contact with the floor. See figure 3b.

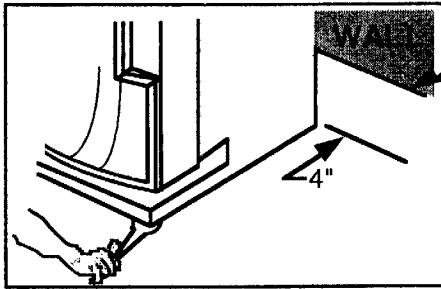


Figure 3b

Voltage Requirements:

The vendor is designed to operate at a voltage of 115 volts, 60 Hertz. It requires a minimum of 15 amp service. The service outlet voltage must not exceed 129 VAC or fall below 103 VAC.

Vendor Power Cord:

The vendor has a three wire grounding cord. The vendor must be plugged into a grounded electrical outlet to protect the customer from an electrical shock.

note: Extension cords are not recommended unless they are authorized prior to use by a certified electrician.

If you are not sure your outlet is properly grounded, have it checked by a qualified electrician.

When you plug in the vendor, you should observe the Following:

1. The florescent lights displaying the vendor will come on.
2. The compressor will begin to run.
3. The "use correct change" on the front of the vendor will light.

NOTICE

Consumer Product Safety Commission strongly recommends the enclosed tip over warning label be affixed near the coin slot of this vendor.

Product Shimming:

Your vendor is set from the factory to vend 12 oz. cans and / or 10 oz. P.L.B. bottles without the use of shims. For the vending of other size packages (product diameter), please contact your local Royal Vendors distributor.

Adjustments (Cams and Backspacers)

Cams:

Your electro-mechanical vendor distributes product through the use of a vend timing cam on each individual vend motor (1 per column). Most vendors that come new from the factory are set to vend double depth 12oz. cans. It is necessary to add filler notches (supplied with cam) when vending single depth packages from wide or narrow columns (fig.3c). To review the operation of the vend timing cam please refer to section 4 Points of Interest, Cam Operation".

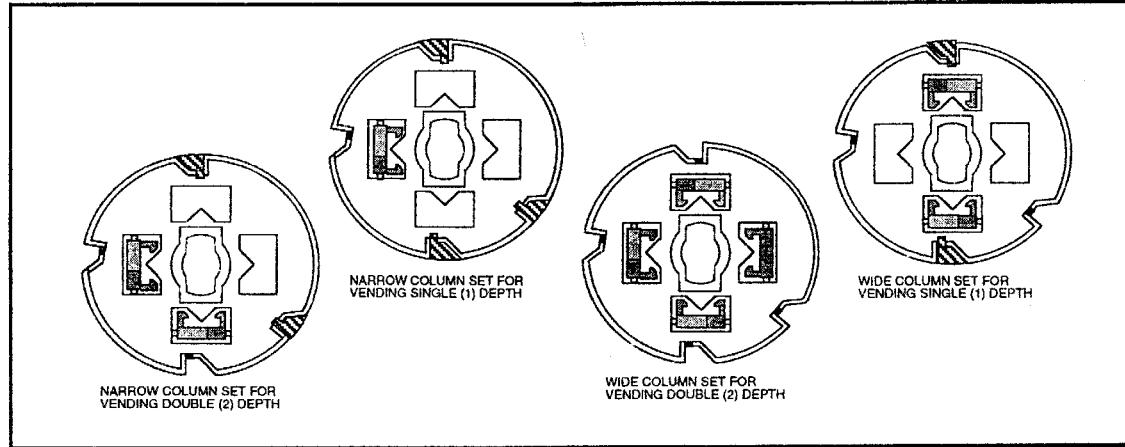


fig. 3c

Backspacers:

Listed in this section are the factory standard backspacer settings for double depth vending of 12 oz. cans and 10 oz. P.L.B.'s. For the vending of other size packages (product length), different adjustments may be necessary. For this information please contact your local Royal Vendors distributor.

Package	Vending Depth	Position (From Front)
12 OZ. CAN	2	8
10 OZ. P.L.B.	2	12

Loading Instructions:

Listed in this section are loading instructions for 12 oz. cans and 10 oz. P.L.B.'s for loading in wide and narrow columns. After loading a vendor for the first time, test vend each selection with money until the first can is delivered for each column. This will ensure proper vending.

note: Placing cans in front of the evaporator will restrict air flow and possibly hinder cooler performance.

WARNING: Placing cans in front of the condenser will restrict air flow and cause unnecessary compressor wear.

Wide Column Loading:

For loading a wide column for the maximum capacity position the oscillator to the extreme right or left. Load the first row of packages on the bottom bar of the oscillator. The second row of packages must be loaded on the top bar of the oscillator in a "zigzag" fashion starting from the bottom of the column and working toward the top.

note: Load bottles with the caps to the rear.

Incorrect Loading - If the initial row of packages is placed on the bottom bar of the oscillator then a row directly loaded on top of these, the oscillator could rotate over upon vending and create a jam. Do not stand product up vertically or jams will occur.

Narrow Column Loading:

Position the rotor in the "cup" position facing upward to receive the first row of product. Load the remainder of product on top of the initial row. Do not stand product up vertically or jams will occur.

note: Load bottles with the caps to the rear.

Testing the Vendor

Once the vendor is properly loaded it is suggested to test vend each column using a variety of coins (and bills if a bill validator is in use) to ensure the vendor is working properly.

notes:

SECTION 4 POINTS OF INTEREST

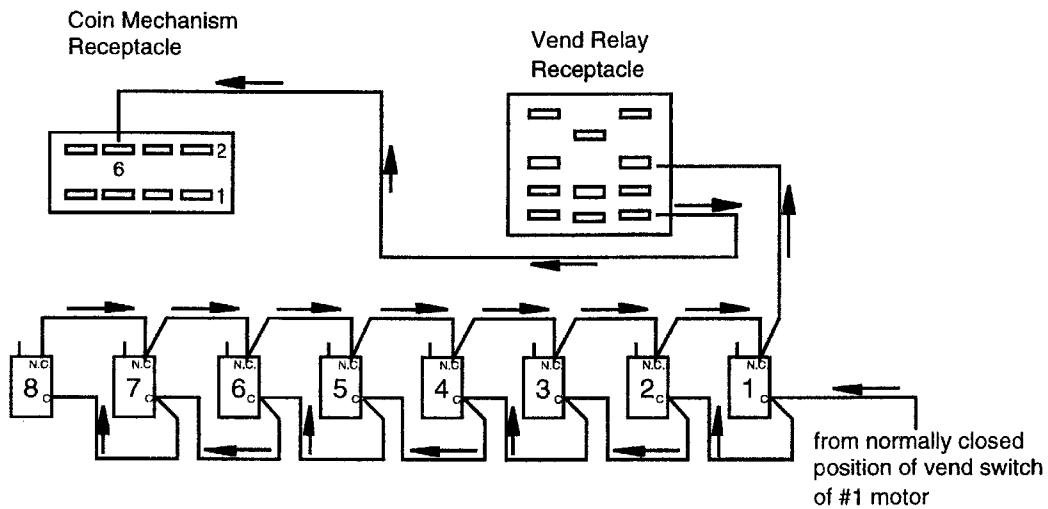
Vend Relay Receptacle

The 11-way vend relay receptacle is located in the changer plug / vend relay bracket. This is one of the most important circuits in the whole machine. The major connections of the vend relay receptacle are as follows:

1. Allows Acceptance:

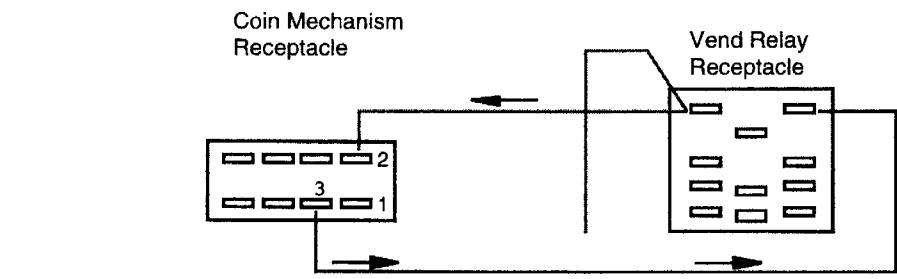
The "crems circuit" is the circuit that allows the vendor to accept coins or bills. Acceptance will be allowed when the vend relay provides 110 VAC to pin #6 of the coin mechanism receptacle. Pin #6 will only have power when at least one column's sold out lever is pressed.

The circuit starts as the front sold out switch for each column receives 110 VAC to the common position. If a column has enough product to depress the sold out paddle the voltage will travel through the switch and come out of the normally closed position. This voltage will be used to power the coin mechanism receptacle at pin #6. Voltage coming out of the normally closed position of any front sold out switch will travel to switch #1 at the common position of the vend relay's receptacle. A wire connects the normally closed position of this same switch to pin #6 of the coin mechanism receptacle.



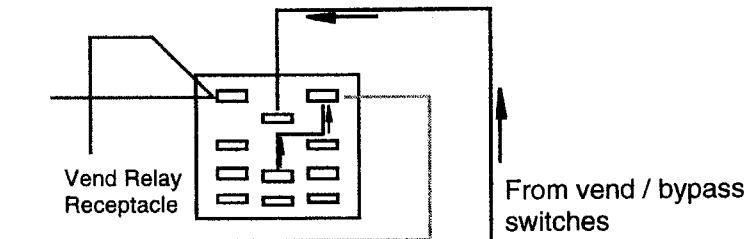
2. Establishes Credit:

Neutral is constantly provided to one side of the vend relay's coil. A wire connects pin #3 of the coin mechanism receptacle to the "hot side" of the vend relay receptacle for the coil. When enough money is inserted to establish a credit the coin mechanism will send a momentary 110 VAC pulse through this wire to energize the vend relay's coil.



3. Hold Credit:

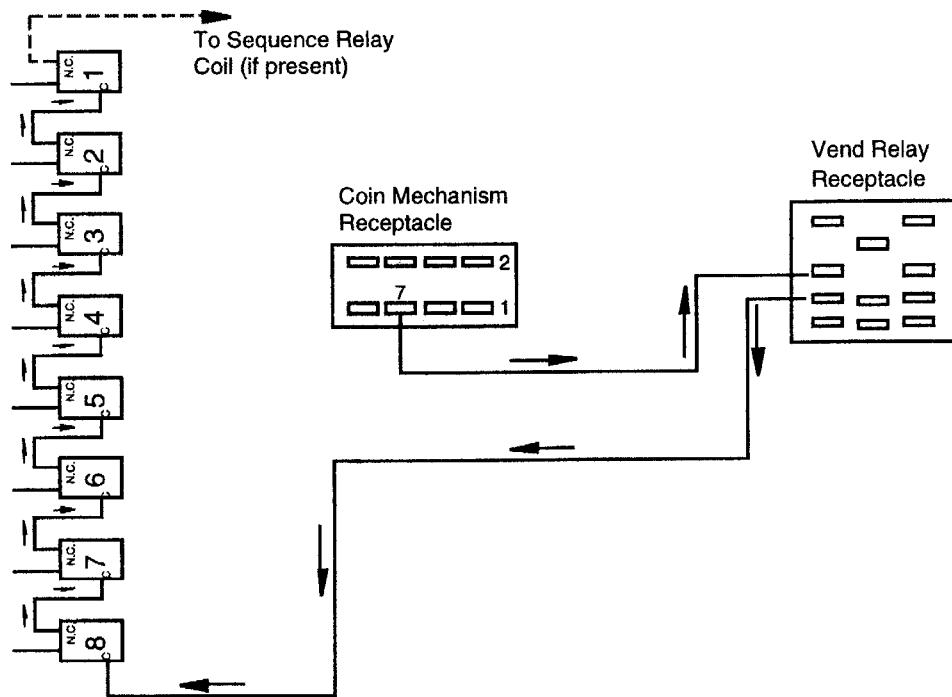
Credit is held by power that comes from the vend motor's vend and bypass switches to the vend relay. This is referred to as the vendor's "holding circuit". (For a detailed description of how this circuit operates see section 4 Cam Operation.) Power will be supplied from the vend motor of column #1 at the normally open position to the vend relay receptacle at the common position of switch #3. A jumper wire is used to connect the normally open position of switch #3 to the hot side of the coil. The voltage in these two sections will be used to power the vend relay's coil (hold coil in) once the momentary pulse described in stage #2 is gone.



4. Energize the Select Panel:

The coin mechanism's pin #7 is responsible for energizing the select panel with 110 VAC to start the vend cycle. A wire connects pin #7 of the coin mechanism receptacle to the common position of switch #2 of the vend relay receptacle. This wire is hot before a credit is established but due to the vend relay not being energized no power will be sent to the select panel. This wire is also hot once the vend relay has been energized to power the common position of switch #2 of the vend relay receptacle. A wire is connected between the normally open position of switch #2 of the vend relay receptacle and the common position of the bottom select switch. This wire takes power from the vend relay to the select panel starting at the bottom switch. The power travels from the bottom switch and through each of the switches above.

note: For vendors with a sequence relay coil, the coil will be energized after power has traveled through each select switch. You can determine this by hearing it click.



5. Discontinue Coin Mechanism Acceptance (reference figure under Item 1):

Once enough money is inserted to establish a credit and the coin changer has energized the vend relay's coil the three switch contacts of the vend relay move from the normally closed position to the normally open position. Switch #1 of the vend relay allows acceptance before the vend relay's coil is energized as mentioned previously in step #1. Once the relay is energized (a credit is established) the contact of switch #1 is moved to the normally open position and power is removed from pin #6 of the coin mechanism. This discontinues coin acceptance by disabling the coin mechanism's crems coil.

6. Cancel Credit (reference figure under Item 3)::

Mentioned previously in step #2, the "holding circuit" is responsible for keeping power to the vend relay's coil to hold credit. The wire connecting the normally open position of the bypass switch of vend motor #1 to the common position of switch #3 of the vend relay receptacle must be hot with 110 VAC for the relay to be held. The power is provided to this wire comes from the extreme left vend motor and it must first "weave" its way through each vend and bypass switch before reaching the common position of switch #3 of the vend relay's receptacle. By the rotation of the cam on the selected vend motor forces the vend and bypass switches into various sequences. By doing this, during the beginning of the vend cycle, power is momentarily interrupted and the vend relay's coil is dropped. (for cause of see section 4 "Cam Operation").

Coin Mechanism Receptacle

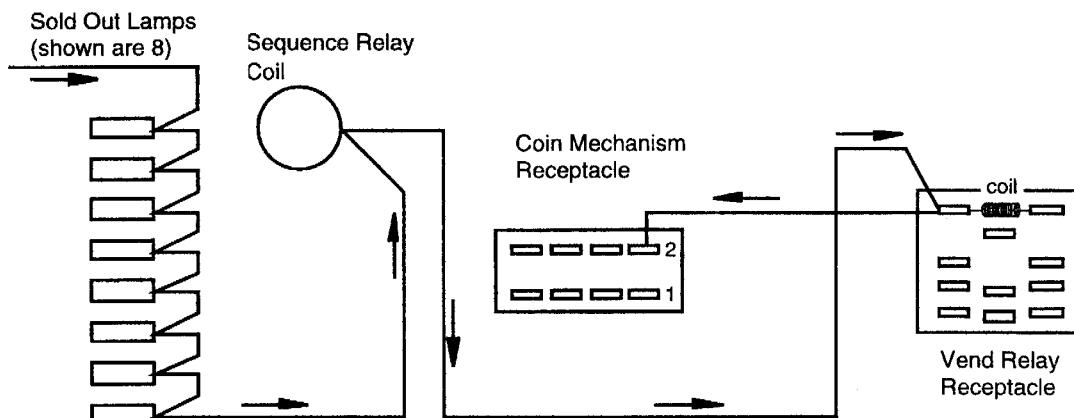
The 8-way coin mechanism receptacle is located in the changer plug/vend relay bracket. Like the vend relay receptacle this connection is important to the vendor's operation. The major connections of the vend relay receptacle are as follows:

Pin 1. Power to Coin Mechanism:

This pin provides 110 VAC to the coin mechanism, this pin should constantly be hot. The wire that plugs into this connection comes from the bottom of the vendor's main door at one of the mate-n-lok connections. Tracing this wire further back, you will find that it connects in with the door / stack power plug at the bottom of the vendor's main door.

Pin 2. Neutral to Coin Mechanism:

This pin constantly provides neutral to the coin mechanism for general operation. Both pin 1 & 2 are needed for the coin mechanism to operate. Neutral is provided to pin #2 of the coin mechanism receptacle from the neutral side of the vend relay's receptacle. Shown in figure 4a from the bottom of the vendor's door to the sequence relay coil (if one is present) then to the neutral side of vend relay's coil. From the vend relay's coil, a jumper wire is connected to pin #2 of the coin mechanism connection.



Pin 3. Power to Establish Credit:

This pin, upon reaching the vend price, will momentarily pulse with 110 VAC to energize the vend relay's coil. This pin is not responsible for holding the vend relay's coil but for initial power to it. A wire directly connects this pin of the coin mechanism connection to the hot side of the vend relay receptacle's coil connection.

Pin 4. This pin is currently not used.

Pin 5. Neutral to Power Correct Change Lamp:

This pin applies neutral to the correct change lamp when needed. A wire connects this pin directly to the correct change lamp.

Pin 6. Receives 110 VAC for Coin Mechanism's Crems Circuit:

This pin receives 110 VAC from the vendor's crems circuit (refer to vend relay receptacle, function 1 for a description and illustration). As long as this pin has power the coin mechanism will accept coins or allow bills to be accepted. Power to this pin means two things, a credit is not established and product is in at least one column.

Pin 7. Powers Select Panel after Credit via Vend Relay:

This pin powers the vend relay receptacle's common position of switch #2 with 110 VAC before and after a credit is set up. The only time that there is not power from this pin is when pin 3 momentarily pulses to begin the credit sequence. After power is sent to the vend relay from this pin it is the vend relays responsibility to power the select panel. (refer to vend relay receptacle, function 4 for a description and illustration).

Pin 8. This pin is currently not used.

Sold-Out Switches

Your vendors sold-out switches are located directly above the vend motors and are easily accessible by removing the sold-out switch cover. Upon doing this you will notice that there are two sold-out switches per column. With most models these switches are fully compatible with the vend motor switches and select switches.

The front sold out switch for each column can be identified by noting the white connectors. The front sold-out switches mainly serve two purposes (see figure 4a):

1. Powers the coin mechanism's crems circuit before a credit is established if at least one column has enough product to depress the sold-out paddle. (see: Section 5 vend sequence).
2. Powers the sold-out lamp continuously for any selection that is sold out.

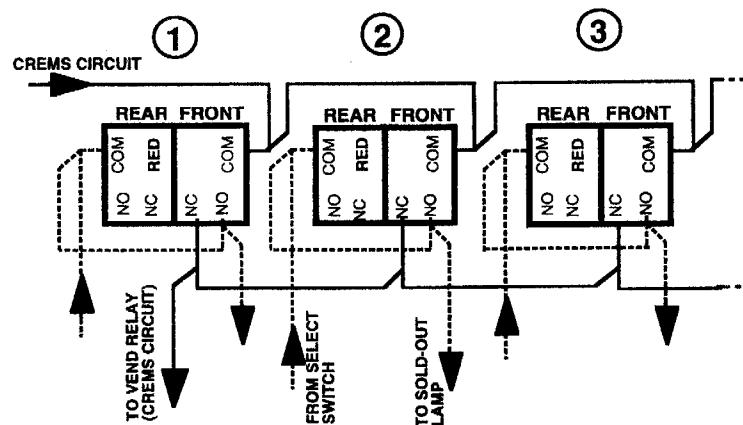


figure 4a

The rear sold-out switch for each column can be identified by noting the red connectors. Upon selection, power from the selection switch must first travel through the rear sold-out switch of the selected column before it reaches the vend motor coil (if product is in the selected column). At the same time the sold-out lamp will be lit until credit is canceled. (see figure 4b).

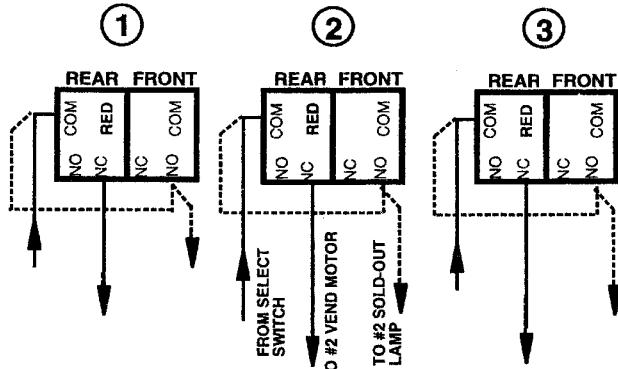


figure 4b

Ballast and Counter Power Sockets

The changer plug bracket houses two 2-way mate-n-lok sockets to provide power to the ballast and to enable the use of a vend counter. The counter and the ballast power plugs share neutral that is provided by a wire that is connected in pin #2 of the coin mechanism receptacle. 110 VAC is provided to the ballast power plug from a wire that is connected in pin #1 of the coin mechanism receptacle. 110 VAC is provided to the counter power plug from a wire that is connected connected in pin #3 of the coin mechanism receptacle. This pin pulses when the coin mechanism receptacle's pin #3 pulses to energize the vend relay's coil.

Cam Operation

The cams front profile (fig.4c) will reveal "high" and "low" sections of the cam. A side profile will show that these "high" and "low" sections are staggered. These sections are what determines vend motor running, stopping, credit holding and cancellation of credit.

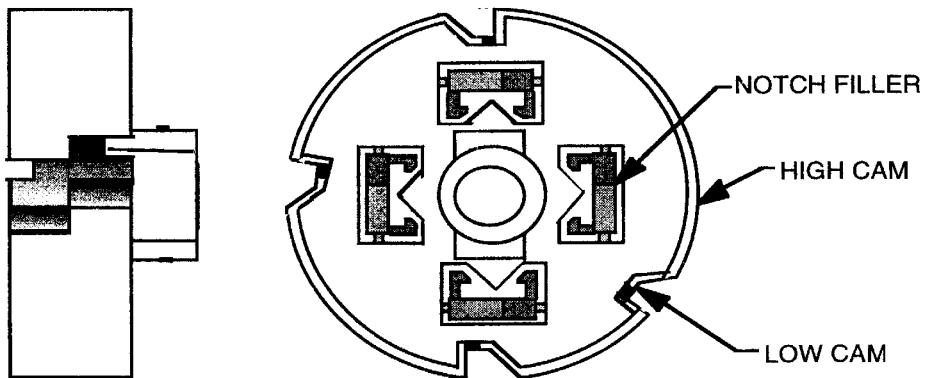


figure 4c

Cam Sequence:

Step #1

In a stand-by position (fig.4c), the front vend motor switch (vend switch) is in low cam, while the rear vend motor switch (bypass) switch is on high cam. In this position, 115 volts travels through each vend motors vend and bypass switches from left to right.

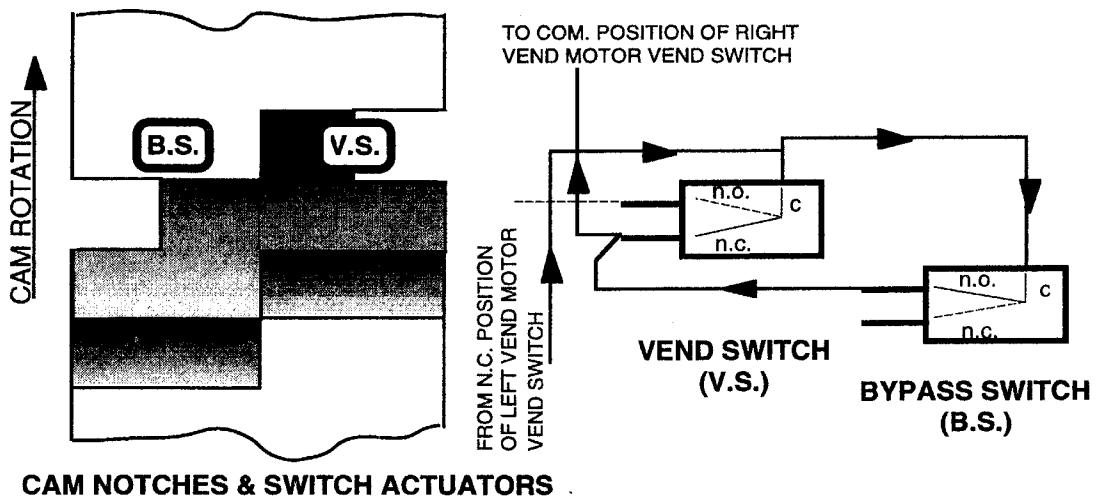


figure 4d

- A. Power exits the normally open position of the extreme right vend motors rear bypass switch and travels to the common position of the vend relays' switch #3. This enables a credit to be held upon reaching vend price, which is commonly known as the holding circuit.
- B. Power simultaneously exits the normally closed position of the vend motors front "vend" switch and travels to the common position of the extreme right front sold-out switch to start the vendors crems circuit. (For more information please reference Section 5: vend cycle - "vend sequence".)

Step #2

Upon selection (fig. 4e), power is supplied from the normally open position of the chosen select switch, through the rear sold-out switch, to the vend motor coil. As the vend motor starts to run it simultaneously rotates the vend timing cam (attached to the vend motor shaft) clockwise.

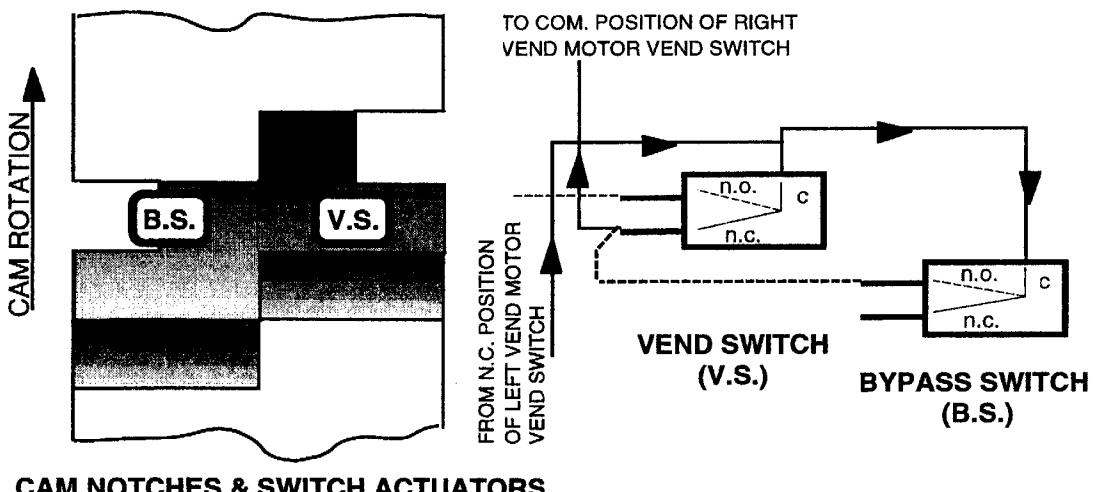


figure 4e

As the cam begins its clockwise rotation the stationary mounted rear "bypass" switch will drop into "low" cam (At this point both switches will be in low cam.). The bypass switch

dropping into low cam with the vend switch presently there is the first step in canceling credit. At this point, the bypass switch no longer bypasses that motors vend switch circuit which will allow the holding circuit to be dropped when the vend switch rides onto high cam.

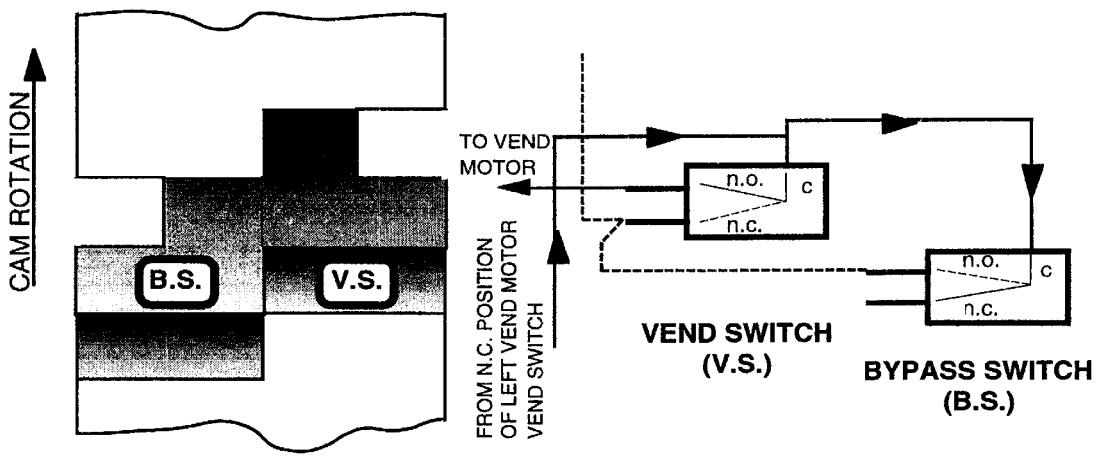
Each vend motors front "vend" switch, in this position, is responsible for providing power to the next consecutive vend motor switches to the right. If the column would jam at this point, credit is not yet canceled so the customer would be allowed a second choice.

note: With the bypass (rear) switch in "low" cam, the vend switch takes all responsibility for carrying power to the vend/bypass switches to the right.

Step #3

(fig. 4f) As the cam continues to rotate clockwise, the vend switch will ride onto "high" cam. Due to the staggered cam, the bypass switch will be left in "low" cam. At this point two things will happen:

- A. As the vend switch rides onto "high" cam it will take over, powering the vend motor, from the normally open position, throughout the rest of the vend cycle (until it drops into the next "low" cam).
- B. As the vend switch rides onto high cam it breaks the holding circuit (common position of switch #3) canceling credit.



CAM NOTCHES & SWITCH ACTUATORS

figure 4f

note: "B" will only occur if the vend motors bypass switch is in "low" cam when the vend switch rides onto high cam. If the bypass switch is "stuck-in" and doesn't drop into low cam, the vendor will hold credit in possibly two different ways:

- A. Credit will be held for that same selection until *that* bypass switch's actuator "pops-out"
- B. Credit will be held for one vend from any different selection which is attempted (assuming that the bypass switch for this selection isn't sticking). The vend/bypass switches from the *different* selection will cancel the credit.

Step #4

(fig. 4g) As the cam continues it's clockwise rotation the bypass switch will ride onto high cam. At this point both switches will be on high cam. The vend switch in this position continues to power the vend motor until it drops into low cam ending the cycle. The bypass switch in this position is responsible for providing power to the vend/bypass switches to the right so that in case of a jam all other columns would be operable.

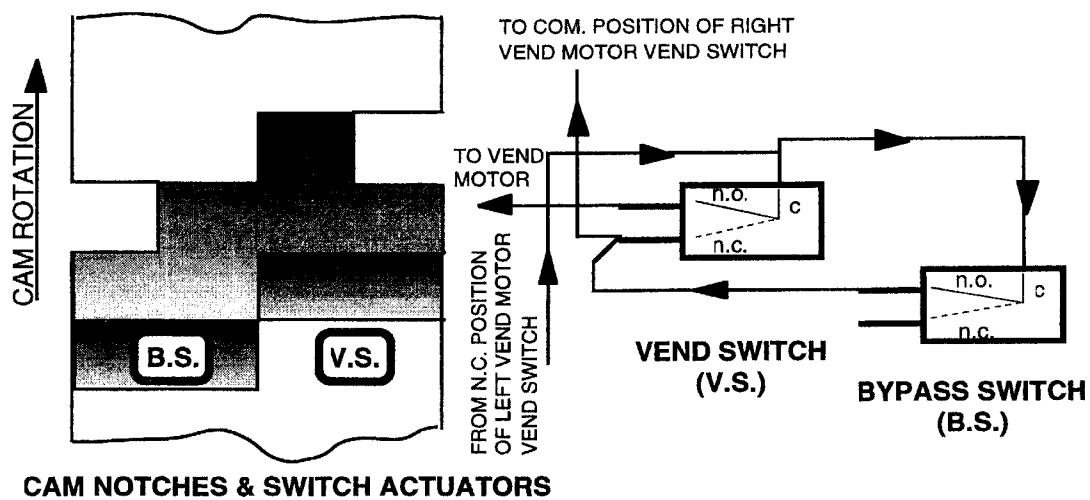


figure 4g

notes:

SECTION 5 VEND CYCLE

Vend Sequence

Power flow at Standby:

With the vendor in a "stand-by mode" (fig. 5a) power enters at the bottom of the vendor's main door through the stack plug (L1= 115 volts, L2= neutral). From the stack plug the power travels into the vendors main door and cabinet.

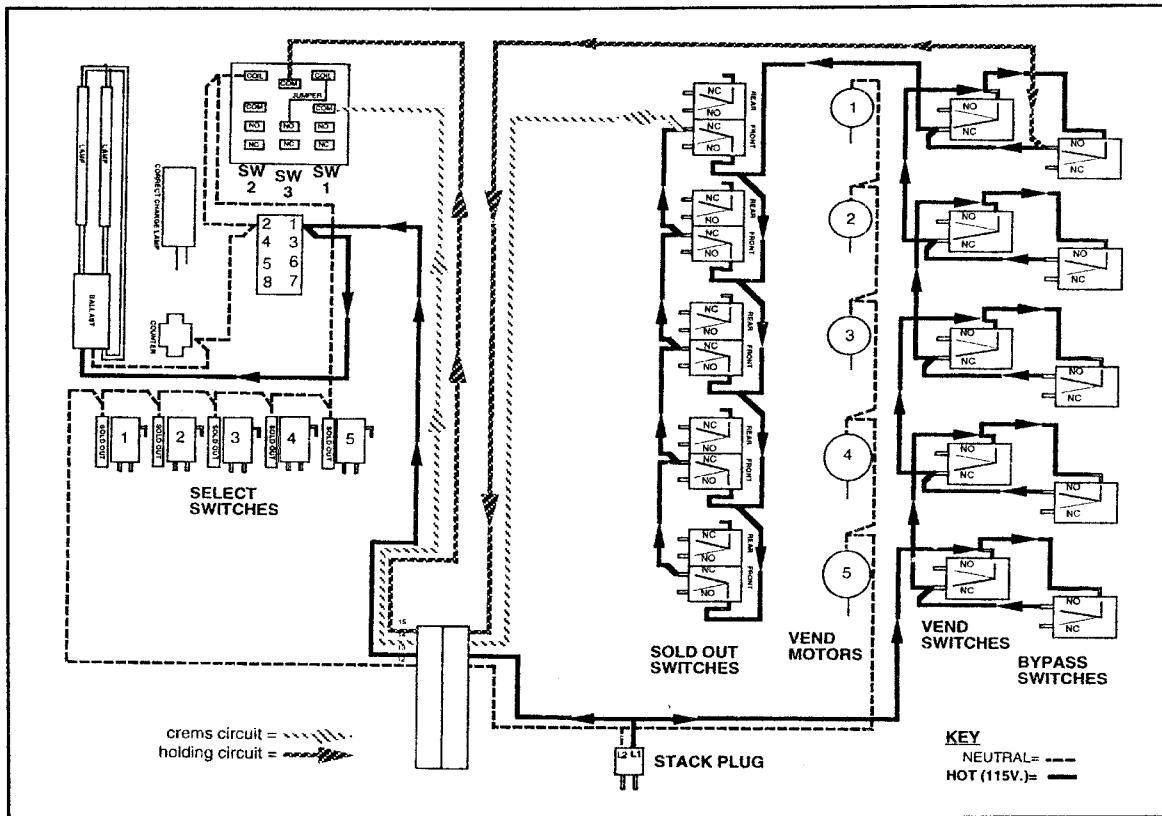


figure 5a

As voltage enters the vendors main door from the stack plug, it travels through the fifteen way mate 'n' lock plug at the bottom of the door to PIN #1 of the coin mechanism receptacle (to power the coin changer). In some cases a wire is also connected in PIN #1 of the coin mechanism receptacle to provide the ballast with 115 volts.

As voltage enters the cabinet from the stack plug it travels to the common position of the extreme left vend motors front (vend) switch. A "jumper" wire is used from this position to provide power to the rear (bypass) switches common position. The rear (bypass) switch provides a circuit around the vend switch in case a jam would occur while the vend switch is on high cam. The power, upon reaching the extreme right vend/bypass switches serves two very important purposes:

1. The voltage travels from the normally closed (n.c.) position of the "front" (vend) switch (extreme left vend motor) to the common (com.) position of each "front" sold-out switch, from this point one of two things will occur.

- A. The front sold-out switch of any columns containing product will route the voltage out the normally closed position and through a single wire to the common (com.) position of switch #1 of the vend relay. This is known as the vendors crems

circuit. Until the vend relay is energized (a credit established) this circuit, in conjunction with switch #1 of the vend relay, will provide 115 volts to the coin mechanism's crems coil enabling acceptance.

B. The front sold-out switch of any empty column will route the voltage from the normally open (n.o.) position to the individual sold-out lamp (one per selection) to continuously indicate a column sell-out.

2. The voltage travels from the normally open (n.o.) position of the extreme right vend motors "rear" (bypass) switch directly to the common (com) position of the vend relays switch #3. This is known as the vendors holding circuit, it holds the vend relays "coil" in upon establishing a credit (with aid from the jumper wire). Credit is canceled by removing power to the "holding circuit" which releases the vend relays "coil" (Reference Section 3 Adjustments, Cams and Backspacers).

Vendor Stand-By:

Before a credit is established pins 1 and 3 are the main pins to observe. In this position, switch #2 does not serve a purpose.

Switch #1...

This switch is responsible for providing power to energize the coin mechanisms crems coil to enable acceptance (when product is in at least one column).

Switch #2...

This switch serves no purpose in this position.

Switch #3...

This switch is responsible for powering the common position to provide a holding circuit.

Establishing Credit:

Upon reaching the vend price (establishing a credit), the coin mechanism will send an instantaneous pulse of 115 volts through PIN #3 of the coin mechanism receptacle to energize the vend relays "coil". THIS PULSE IS ONLY MOMENTARY. Once a credit is established by "pulling in" (energizing), the vend relay controls the following:

Switch #1...

This switch discontinues coin acceptance by removing power from pin #6 of the coin mechanism receptacle.

Switch #2...

This switch energizes the select panel by powering the bottom select switch.

Switch #3...

This switch is responsible for holding credit.

After a Credit, Before a Selection:

As the vend relay's normally open position of switch #2 sends 115 volts to the common position of the extreme bottom select switch. The voltage will travel out the normally closed position of the extreme bottom select switch and to the common position of the upper next select switch. This "chain" of power will continue until it reaches the #1 (top) selection switch, at this point one of two things will take place:

A. On RVCC model vendors the power flow will continue out of the #1 selections normally closed position to the sequence relay coil. This energizes the coil every time a credit is established and de-energizes it when a selection is made. If the #1 selection is chosen, power will travel to columns #1 or #2 alternately.

B. On all other model vendors the power will stop at the top selection switch

Credit Cancellation and Product Delivery:

As the selection switch powers the vend motor, rotating the vend timing cam clockwise, the vend motors rear bypass switch will drop into "low" cam with the front vend switch. This is the first step to canceling credit.

As the cam continues to rotate clockwise the vend motor's vend switch will ride onto "high" cam while leaving the bypass switch in "low" cam. This cancels credit, discontinuing power to the select panel. The vend switch will also take over, powering the vend motor until it drops into the next low cam. During this time product will be delivered.

Sold Out

A sold-out condition occurs when a column sells down, leaving a row of product in pre-cool. As the product vends below the sold-out paddle, the paddle will extend into the column engaging the two sold-out switches. The front sold-out switch (white connector) in a sold-out condition will continuously light the sold-out indicator lamp for that selection. It will also discontinue it's contribution to powering the vendors "crems circuit". (If all columns are sold-out, power will be removed from the vend relay's switch #1 common position disabling the coin mechanism's crems coil.) The rear sold-out switch (red connector) in a sold-out condition will not allow power to reach the vend motor coil from the select panel.

note: The rear sold-out switch has a jumper wire that connects to the normally open position of the front sold-out switch to light the sold-out lamp upon selection until credit is canceled.

notes:

SECTION 6

MAINTENANCE

Taking Care of Your Vendor

Unpack the Vendor:

Unwrap the vendor and remove any padding. Check for signs of damage at the time of delivery. If the vendor is damaged, contact the carrier immediately. The carrier will instruct you as to the procedure for filing a claim.

Note: The vendor keys are located in the coin return cup.

Note: Remove stretch-wrap if storing the vendor in direct sunlight.

Removing the Shipping Skids:

Separate (split) each skid section by inserting either a claw hammer, crow-bar, or similar device into the slot of each section to break apart. Tilt the vendor slightly to remove the separated pieces.

Placing the Vendor on Location:

When placing the vendor on location, allow for a minimum of four inches (4") of space at the rear of the vendor. This will ensure proper ventilation of the refrigeration system.

Level the Vendor:

Level the vendor by adjusting the four leveling legs on the bottom corners of the vendor. The vendor is level if the main door remains stationary when opened to different positions. The four leveling legs must be in contact with the floor. This is imperative for proper drainage of evaporator frost.

Voltage Requirements:

The vendor is designed to operate at a voltage of 115 volts, 60 hertz. It requires a minimum of 15 amp service. The service outlet voltage must not exceed 129 VAC or fall below 103 VAC.

Vendor Power Cord:

The vendor has a 3-prong, three-wire grounding cord. The vendor must be plugged into a grounded electrical outlet to protect the customer from an electric shock. If you are not sure your outlet is properly grounded, have it checked by a qualified electrician.

Note: Extension cords are not recommended unless they are authorized before use by a certified electrician.

When you plug in your vendor, you should observe the following:

1. The fluorescent lights displaying the vendor sign will come on.
2. The refrigeration compressor will start to run.

Troubleshooting

PROBLEM: Not accepting coins.

PROBABLE CAUSE: (Assuming the coin mechanism and vend relay are not at fault)

- No power to vendor.
- Columns are empty of product, crems circuit is dead (all sold-out lamps will be lit).
- Crems circuit is inoperative at some point.

No Power to Vendor:

1. Check to ensure that the vendor is plugged in.
2. Make sure that the coin mechanism receptacle has power. Pin 1 should be hot with 110 VAC and pin 2 should be neutral.

Columns are Empty of Product: (All sold-out lamps will be lit)

1. Check to ensure that at least one column has enough product to depress the sold-out paddle to allow power to reach the coin mechanism's crems coil.

Crems Circuit is Inoperative at Some Point:

1. Follow the directional flow of electrical current to ensure that pin #6 of the coin mechanism receptacle is receiving 110 VAC (see below).
 - A. Starting at the extreme left vend motor and working to the right, press each individual vend motor's front vend switch, rotating the vend timing cam through one vend cycle for each vend motor. If a vend motor doesn't cycle, the problem is either in the wiring between the problem vend motor and the vend motor to the left, -or- the vend and/or bypass switches of the non-cycling vend motor. If all vend motors cycle correctly then move on to step B.
 - B. Starting at the extreme left vend motor and working to the right, with each column full of product (all sold-out paddles depressed), press each individual column's front sold-out switch (white connector) to vend from each column. This will show that power has reached each front sold-out switch at the common position.

Note: On all RVCC model vendors, columns 1 and 2 will not vend when using the front sold-out switches due to the wiring for sequencing.

Note: In order to enable coin mechanism acceptance, the extreme right column's front sold-out switch must send 115 volts from the normally closed (NC) position to the vend relay's common (COM) position of switch #1.

- C. Check for loose connections or cut wires beneath the coin mechanism receptacle and vend relay receptacle.

PROBLEM: Accepts coins but will not vend from one column.

PROBABLE CAUSE:

- Faulty wiring (a cut or disconnected wire)
- Select switch
- Vend relay
- Coin mechanism

Faulty Wiring:

1. Check to ensure that a wire connects pin #7 of the coin mechanism receptacle to the common position of the vend relay receptacle (switch #2), and is not cut or hasn't disconnected.
2. Check to ensure that a wire connects the normally open (NO) position of the vend relay receptacle (switch #2) to the common (COM) position of the extreme bottom select switch, and isn't cut or has not disconnected.
3. Check the select switch wiring from the normally closed (NC) position to the common (COM) position of the next upper select switch for cuts or incomplete connections.

Select Switch:

1. If the 110 volts has reached the common (COM) position of the bottom select switch but still no vend is allowed, replace the bottom select switch.

Vend Relay:

1. In order to power the select panel, the vend relay must disperse 110 volts out the normally open (NO) position of switch #2. If no voltage is registered at this position, check the common (COM) position of switch #2 (from the coin mechanism). If still no voltage is registered, change vend relay.

Coin Mechanism:

1. To energize the select panel upon credit, the coin mechanism must first send 110 volts of electricity through pin #7 of the coin mechanism receptacle to the vend relay receptacle (common position of the switch #2). If upon crediting pin #7 of the coin mechanism receptacle does not register 110 volts, replace the coin mechanism.

PROBLEM: Accepts coins but will not vend from one or more columns.

PROBABLE CAUSE:

- Faulty wiring (a cut or disconnected wire)
- Defective select switch

Faulty Wiring:

1. If a selection can not be made from the extreme top select switch, or from any middle select switch with all the select switches above inoperable, check the wire coming from the normally closed (NC) position of the extreme top operable select switch for cuts or a disconnection.

Defective Select Switch:

1. If all connections are correctly made and a cut can not be found, then replace the lowest inoperable selection switch.

PROBLEM: Multiple vends upon selection.

PROBABLE CAUSE:

- Vend motor / cam setting
- Vend motor's front (vend) switch

Vend Motor / Cam Setting:

1. A multiple vend upon selection may be from either the vend timing cam having too many notches filled (refer to Section 3, "Adjustments - Cams and Backspacers") or from defective or out-of-adjustment vend motor components.
 - Vend motor's brake pawl is sticking from product syrup. (Try cleaning.)
 - Brake pawl spring is bent out of shape
 - Vend motor's brake clutch projections may be broken.

Vend Motor's Front (Vend) Switch:

1. A multiple vend may also be due to a sticking or broken vend switch. Replace defective switches.

PROBLEM: Double vend, then dry vend.

PROBABLE CAUSE:

- Vend motor / cam setting
- Bent rotor (narrow column) or oscillator (wide column)

Vend Motor / Cam Setting:

1. A multiple vend upon selection may be from either the vend timing cam having too many notches filled (refer to Section 3 - "Adjustments - Cams and Backspacers") or from defective or out-of-adjustment vend motor components.

Bent Rotor or Oscillator:

1. Remove the rotor or oscillator and check each for any sign of twisting (rotor) or a bowing arm (oscillator).

PROBLEM: Establish a credit and a selection is made on its own (pre-select).

PROBABLE CAUSE:

- Miswired select switch
- Sticking select switch

Miswired Select Switch:

1. If the normally closed (NC) position and the normally open (NO) position of the same selection switch are reversed, a pre-selection will occur upon crediting every time. This is not likely to be seen on a vendor that has been working fine.

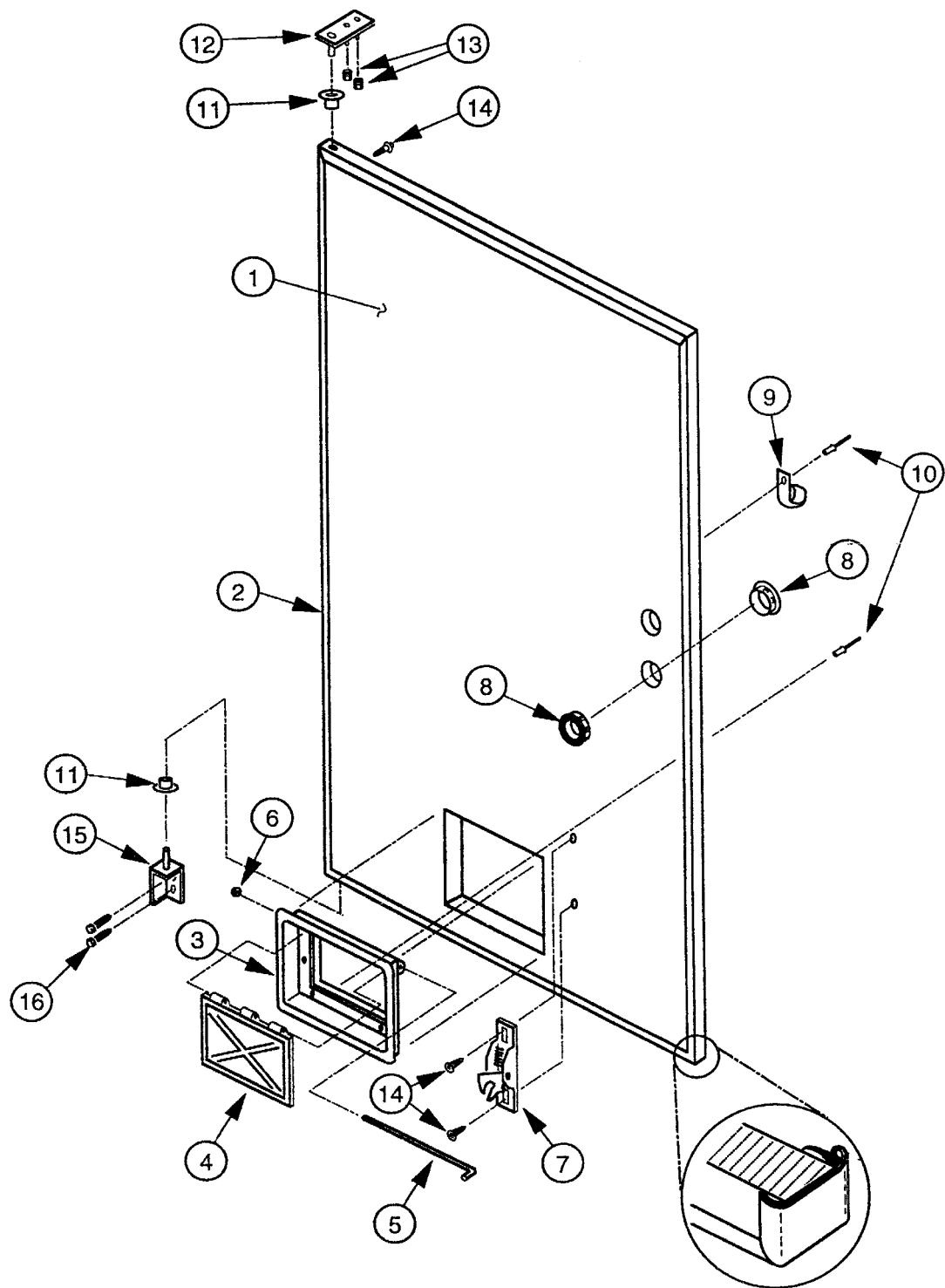
Sticking Select Switch:

1. A sticking select button / switch will cause a pre-select. Change select switch.

SECTION 7

EXPLODED VIEWS and PART NUMBERS

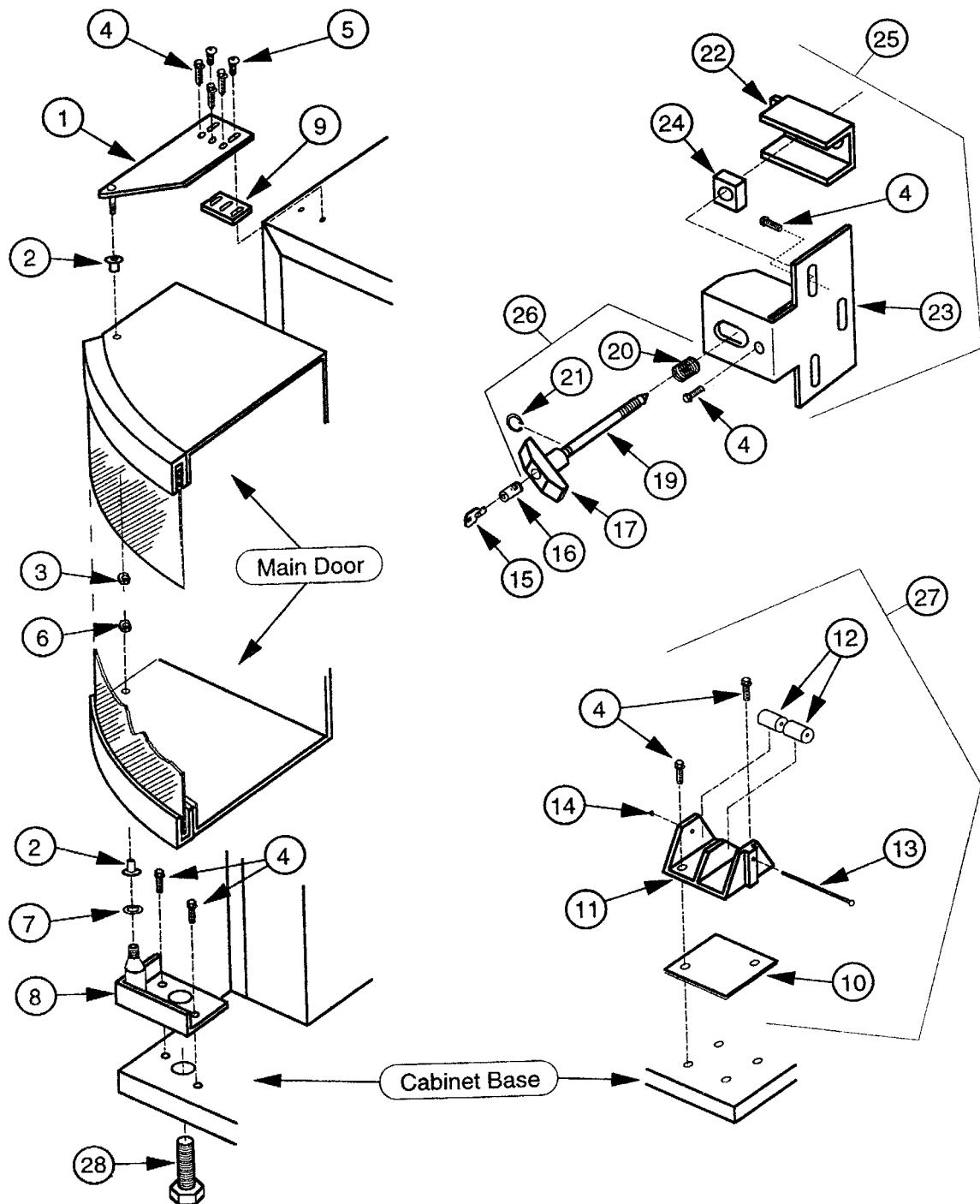
Inner Door Assembly



Inner Door Assembly

ITEM NO.	DESCRIPTION	PART NO.
1	Inner Door Assembly, 72"	011620
	Inner Door Assembly, 79"	010620
2	Inner Door Gasket, 72" Wide	815032
	Inner Door Gasket, 79"	815033
3	Port Door Frame	815013
4	Port Door	815014
5	Port Door Rod	811004
6	Elastic Stop Nut #6-32	905006
7	Latch Strike (for inner door)	812003
8	Bushing, 1.37"	916003
9	Cable Clamp, 1"	916004
10	Rivet, 3/16" diameter	908002
11	Inner Door Bushing	815026
12	Inner Door Hinge	010520
13	Nut, #8-32	905001
14	Self-drilling Screw, #8-18 x 1/2"	010543
15	Bottom Door Hinge	010543
16	Bolt, 1/4-20 x 1"	901003

Main Door Hinge, Lifter, & T-Handle Assembly



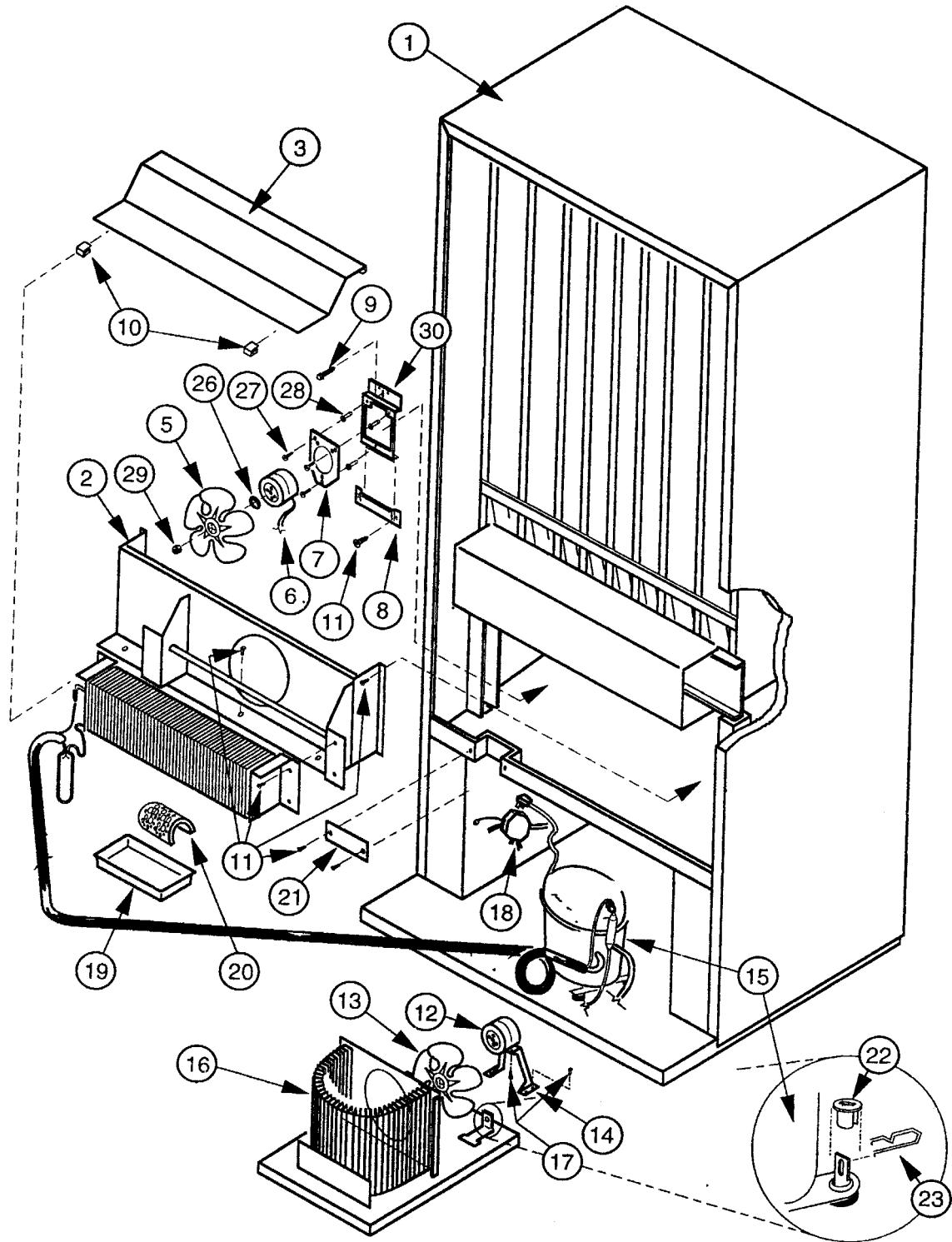
Main Door Hinge, Lifter, & T-Handle Assembly

ITEM NO.	DESCRIPTION	PART NO.
1	Top Hinge Assembly	810002
2	Bearing, Nyliner 1/2"	916012
3	Nut, 5/8"	905007
4	Self-tapping Bolt, 1/4-20 x 1"	901003
5	Carriage Bolt, 1/4-20 x 1"	901008
6	Nut, 1/4-20	905002
7	Flat Washer, 7/8" OD	904002
8	Bottom Hinge Assembly	010040
9	Top Hinge Spacer	010016
10	Door Roller Spacer (as required)	010015
11	Door Roller Bracket	SEE NOTE #2
12	Door Roller	SEE NOTE #2
13	Door Roller Pin	SEE NOTE #2
14	Retaining Ring, 5/32"	906005
15	Key	SEE NOTE #1
16	Lock	SEE NOTE #1
17	T-Handle Body (all except Vandal Res. Door)	812134
18	Pin, T-Handle	912133
19	T-Handle Stud	803006
20	Spring	SEE NOTE #2
21	Retainer Ring	SEE NOTE #2
22	Nut Retainer	010028
23	Latch Strike	010027
24	Square Nut, 1/2-13 x 3/4"	905005
25	Latch Strike Assembly	010030
26	T-Handle Assembly	812001
27	T-Handle Assembly (all Vandal Resistant Doors).....	812176
28	Door Lifter Assembly	815030
	Leveling Leg	803002

NOTE #1: There are various parts. Please specify model and serial number at the time of order.

NOTE #2: This part is not available individually. It must be ordered as an assembly.

Cabinet and Refrigeration System



Cabinet and Refrigeration System

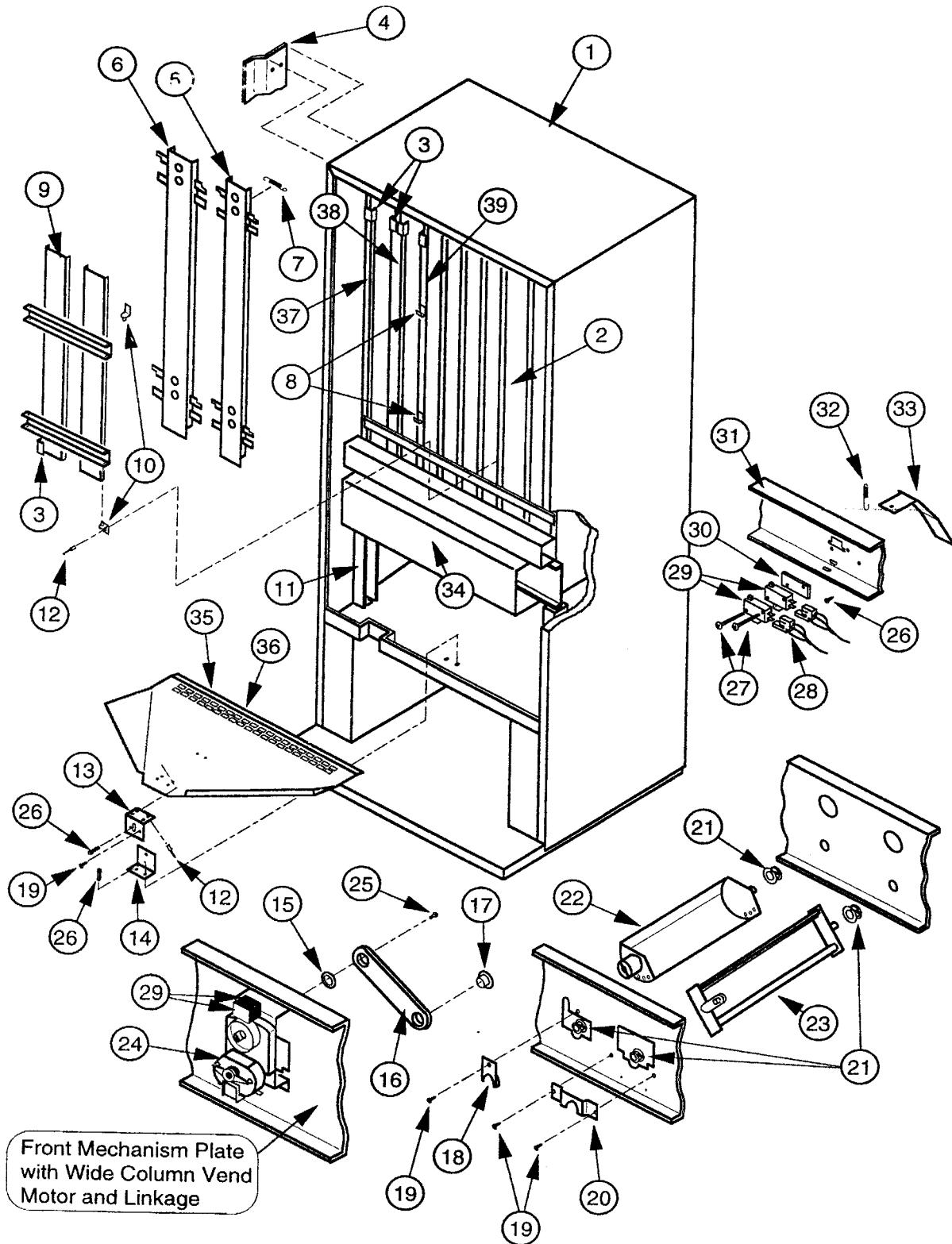
ITEM NO.	DESCRIPTION	PART NO.
1	Foamed Cabinet Assy., 72" Wide 2-deep*	011220
	Foamed Cabinet Assy., 72" Wide 3-deep*	058220
	Foamed Cabinet Assy., 79" Wide 2-deep*	010230
2	Evaporator Fan Shroud Assembly	010010
3	Evaporator Cover	010013
4	Grommet - Evap. Fan Motor (not shown)	916006
5	Fan Blade, Evaporator	810004
6	Fan Motor, Evaporator	839001
7	Evaporator Fan Plate	010058
8	Fan Motor Bracket, Evaporator	010006
9	Self-tapping Bolt, 1/4-20 x 1"	901003
10	U-clip	906007
11	Self-drilling Screw, #8 x 1/2"	902004
12	Fan Motor, Condenser	839010
13	Fan Blade, Condenser	810003
14	Fan Motor Bracket, Condenser	810006
15	Compressor	SEE NOTE #1
16	1/3+ H.P. Refrigeration System w/Capacitor	156430
	1/3 H.P. Refrigeration System w/Capacitor	141420
17	Screw, #8-32 x 3/8"	901011
18	Main Wiring Harness, Electro-Mechanical	842005
19	Condensate Pan	810005
20	Sponge	815037
21	Wiring Cover Plate	010002
22	Grommet Plug	815017
23	Compressor Clip	914002
24	Relay 1/3 Tecumseh (not shown)	822002
	Relay 1/3+ Tecumseh (not shown)	822009
25	Overload 1/3 Tecumseh (not shown)	822004
	Overload 1/3+ Tecumseh (not shown)	822010
26	Silencer	939037
27	Screw, #8-32 x 1/2"	901038
28	Well Nut (Rubber), #8-32	905026
29	Nut, 1/4-20**	905002
30	Mounting Bracket, Evaporator Fan Plate	010057

* Denotes that a color must be specified.

** Denotes that Loc-Tite threadlocker #262 is used on motor shaft before mounting this nut.

NOTE #1: This part is not available individually. It must be ordered as an assembly.

Cabinet, Vend Mechanism (non-electronic)



Cabinet, Vend Mechanism (non-electronic)

ITEM NO.	DESCRIPTION	PART NO.
1	Foamed Cabinet Assembly, 72" Wide 2-deep	011220
	Foamed Cabinet Assembly, 72" Wide 3-deep	058220
	Foamed Cabinet Assembly, 79" Wide 2-deep	010230
2	Vend Mechanism Assembly	SEE NOTE #1
3	Hem Channel Cap	815024
4	Left Cabinet Vandal Panel, 79" (1302 & after)*	141002
	Left Cabinet Vandal Panel, 72" (1302 & after)*	142001
	Left Cabinet Vandal Panel, 79" (before 1302)	010022
	Left Cabinet Vandal Panel, 72" (before 1302)	011001
5	Backspacer Assembly, Narrow Column	SEE NOTE #1
6	Backspacer Assembly, Wide Column	SEE NOTE #1
7	Spring, Backspacer	914001
8	Latch, Gate	010725
9	Mechanism Gate Weld Assembly	SEE NOTE #1
10	Hinge, Gate	010726
11	Mechanism Support, 2-deep	010005
	Thermostat Bracket / Mechanism Support, 2-deep	010020
	Mechanism Support, 3-deep	058001
	Thermostat Bracket / Mechanism Support, 3-deep	058010
12	Pop Rivet, 1/8"	908001
13	Can Chute Bracket	010018
14	Can Chute Tie Bracket	010017
15	Washer, Nylon 1/2" ID	904001
16	Linkage Arm (Wide Column Motor only)	809005
17	Nyliner, 3/8"	916011
18	Rotor Retainer (Narrow Column only)	815012
19	Screw, #8-32 x 3/8"	901011
20	Journal Plate (Wide Column only)	010708
21	Nyliner, 1/2"	916010
22	Rotor, 2-deep (Narrow Column only)	809002
	Rotor, 3-deep (Narrow Column only)	809007
23	Oscillator, 2-deep (Wide Column only)	809003
	Oscillator, 3-deep (Wide Column only)	809008
24	Vend Motor Assy. (Wide Col.) - Regular 2-deep	010730
	Vend Motor Assy. (Wide Col.) - Regular 3-deep	059760
	Vend Motor Assy. (Narrow Col.) - Regular 2-deep	010720
	Vend Motor Assy. (Narrow Col.) - Regular 3-deep	059770
25	Self-tapping Screw with Star Washer	901006
26	Self-tapping Screw, 1/4-20 x 1"	901003
27	Screw, #4 x 1 1/8"	902003
28	Cabinet Harness (not shown)	SEE NOTE #1
29	Miniature Switch	835001
30	Switch Insulator / Spacer	815016
31	Sold-out Bar	SEE NOTE #1
32	Sold-out Spring	914003

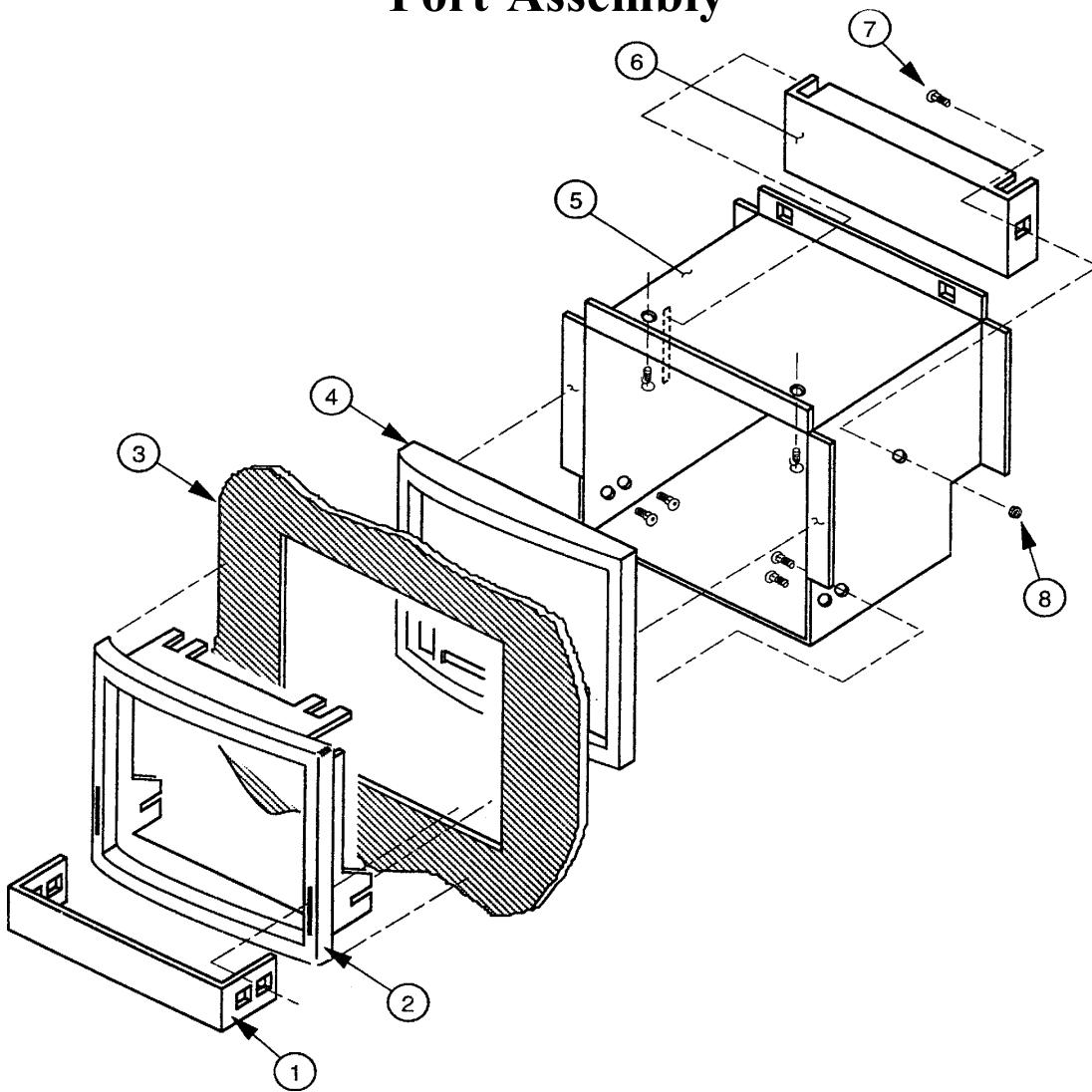
Cabinet, Vend Mechanism (non-electronic) - continued

33	Sold-out Paddle, Wide Column	010729
	Sold-out Paddle, Narrow Column	010731
34	Motor Cover, Wide Cabinet	010029
	Motor Cover, Narrow Cabinet	036003
35	Wide Can Chute Assembly, 2-deep	010070
36	Can Chute Liner, Wide	010021
37	Hem Angle - Left - 2-deep, 79"	010717
	Hem Angle - Left - 2-deep, 72"	011708
	Hem Angle - Left - 3-deep, 79"	058711
	Hem Angle - Left - 3-deep, 72"	059707
38	Hem Channel - 2-deep, 79"	010715
	Hem Channel - 2-deep, 72"	011711
	Hem Channel - 3-deep, 79"	058709
	Hem Channel - 3-deep, 72"	059706
39	Hem Angle - Right - 2-deep, 79"	010716
	Hem Angle - Right - 2-deep, 72"	011709
	Hem Angle - Right - 3-deep, 79"	058712
	Hem Angle - Right - 3-deep, 72"	059708
40	Self-tapping Screw, 1/4-20 x 1"	901003
•	Rear Can Retainer (not shown)	810007
•	Wire Tie, 4" (not shown - holds S.O. Harness)	916007
•	Wire Tie, Large (not shown)	916008

* Denotes that a color must be specified.

NOTE #1: There are various parts. Please specify model and serial number at the time of order.

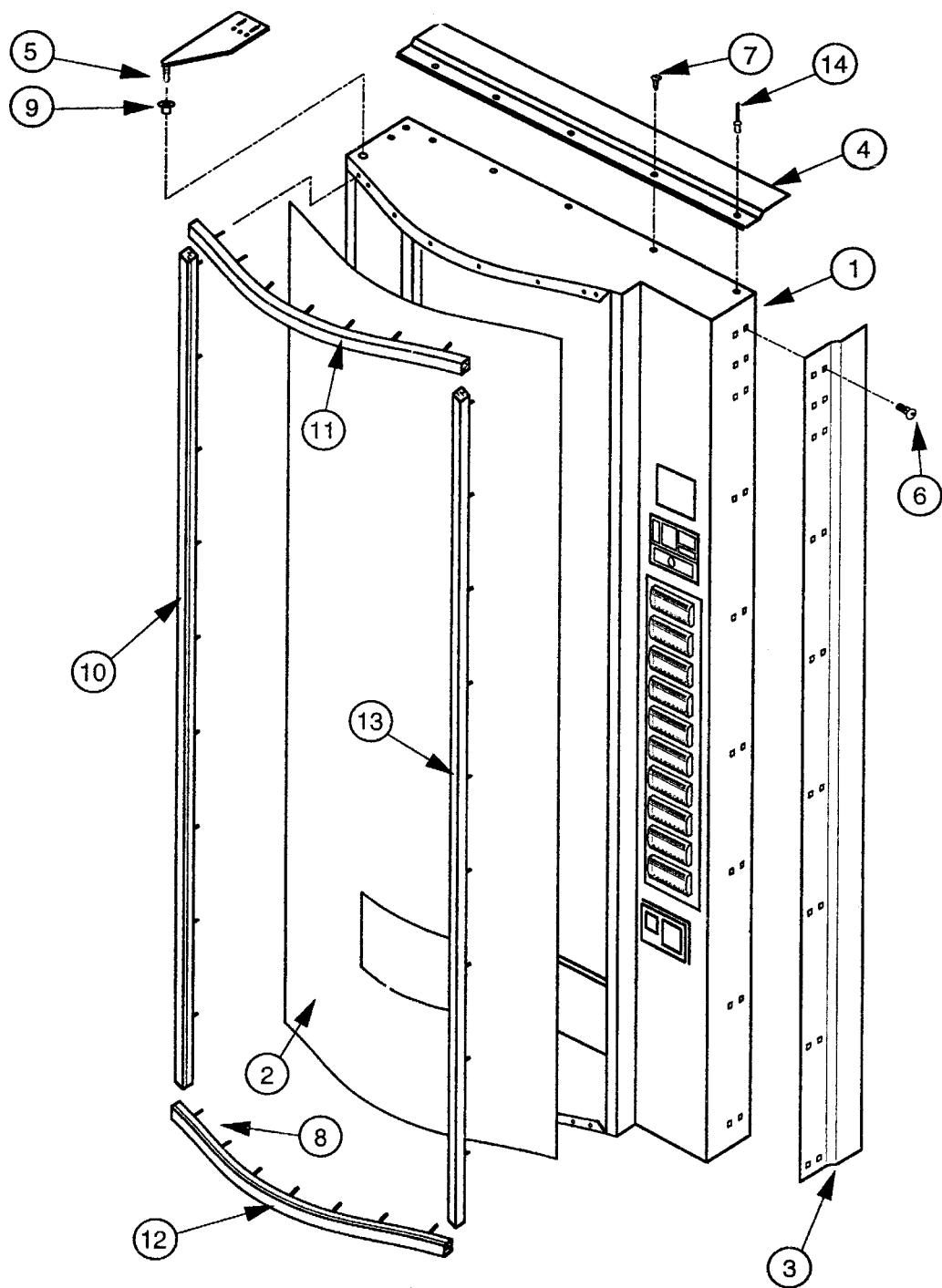
Port Assembly



ITEM NO.	DESCRIPTION	PART NO.
1	Can Stop.....	010508
2	Port Trim.....	815019
3	Sign	SEE NOTE #1
4	Port Spacer	815020
5	Port Body W/A, Coke	010530
	Port Body W/A, Pepsi / Cold Drink	012560
6	Anti-Theft Plate (all except 16 oz. & CDC Vendors)	010509
	Anti-Theft Plate (Bottles).....	141102
7	Bolt 1/4-20 x 1/2"	901007
8	Nut 1/4-20	905002

NOTE #1: There are various parts, please specify model and serial number at the time of order.

Pepsi / Cold Drink Main Door, Front Assembly



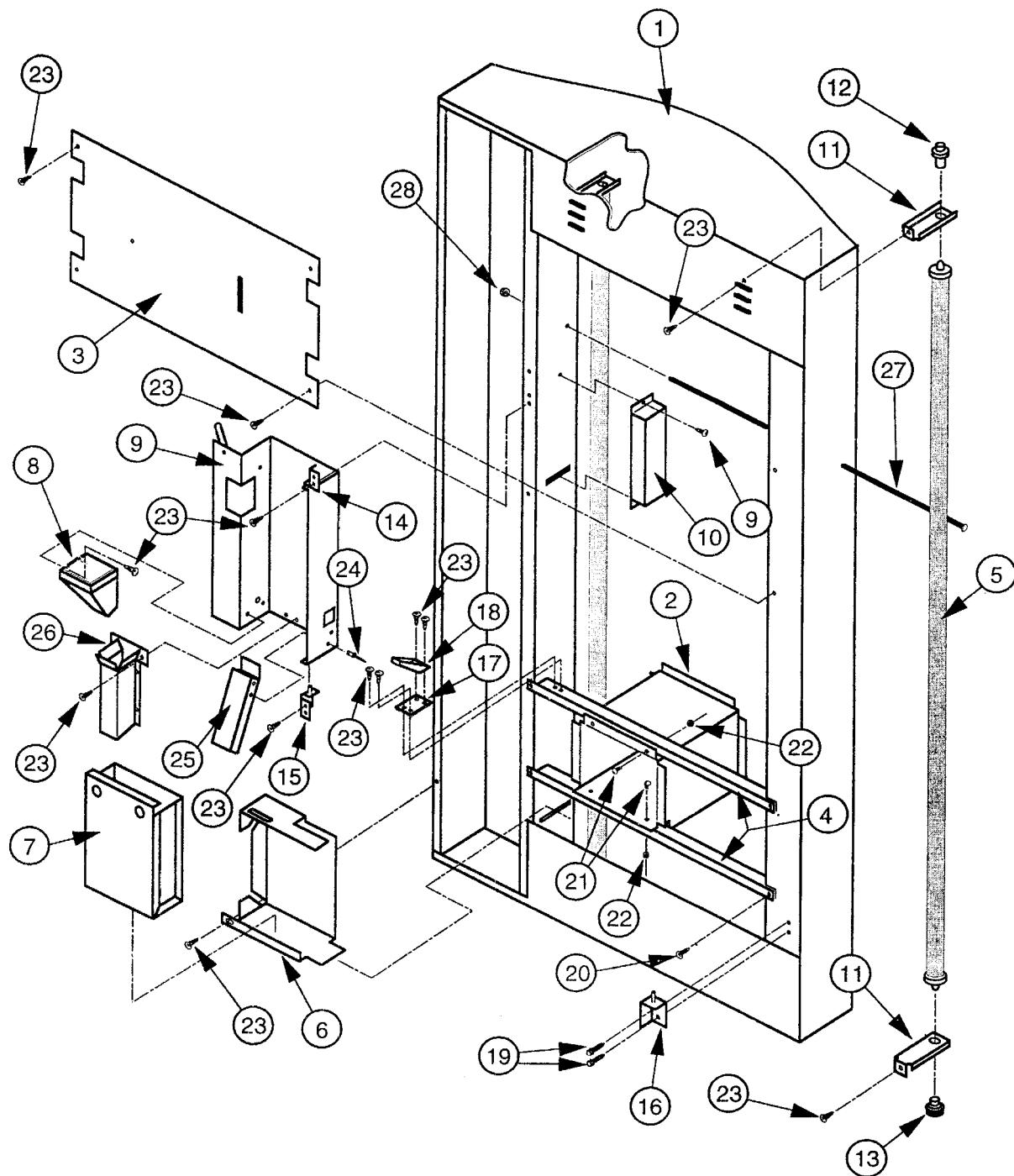
Pepsi / Cold Drink Main Door, Front Assembly

ITEM NO.	DESCRIPTION	PART NO.
1	Door Weld Assembly, 79" (Pepsi)*	012520
	Door Weld Assembly, 79" (Cold Drink)*	020510
	Door Weld Assembly, 72" (Pepsi)*	013510
	Door Weld Assembly, 72" (Cold Drink)*	019510
2	Sign	SEE NOTE #1
3	Right Vandal Panel, 79"	010519
	Right Vandal Panel, 72"	011501
4	Rain Guard, Wide Vendors	010518
5	Top Door Hinge	810002
6	Carriage Bolt, 1/4-20 x 1/2"	901007
7	Self-drilling Screw, #8-18 x 1/2"	902004
8	T-screw, #8-32 x 3/4"	901001
9	Top Door Bushing	803003
10	Left Side Trim, 79" (Pepsi)	141553
	Left Side Trim, 72" (Pepsi)	142502
	Left Side Trim, 79" (Cold Drink)	032505
	Left Side Trim, 72" (Cold Drink)	019507
11	Top Trim, 79" & 72" (Pepsi)	012533
	Top Trim, 79" & 72" (Cold Drink)	032504
12	Bottom Trim, 79" & 72" (Pepsi)	012533
	Bottom Trim, 79" & 72" (Cold Drink)	032507
13	Right Side Trim, 79" (Pepsi)	012554
	Right Side Trim, 72" (Pepsi)	013507
	Right Side Trim, 79" (Cold Drink)	032506
	Right Side Trim, 72" (Cold Drink)	019508
14	Pop Rivet, Stainless Steel, 1/8" diameter	908001

* Denotes that a color must be specified.

NOTE #1: There are various part numbers. Please specify model and serial number at the time of order.

Pepsi / Cold Drink Main Door, Rear Assembly

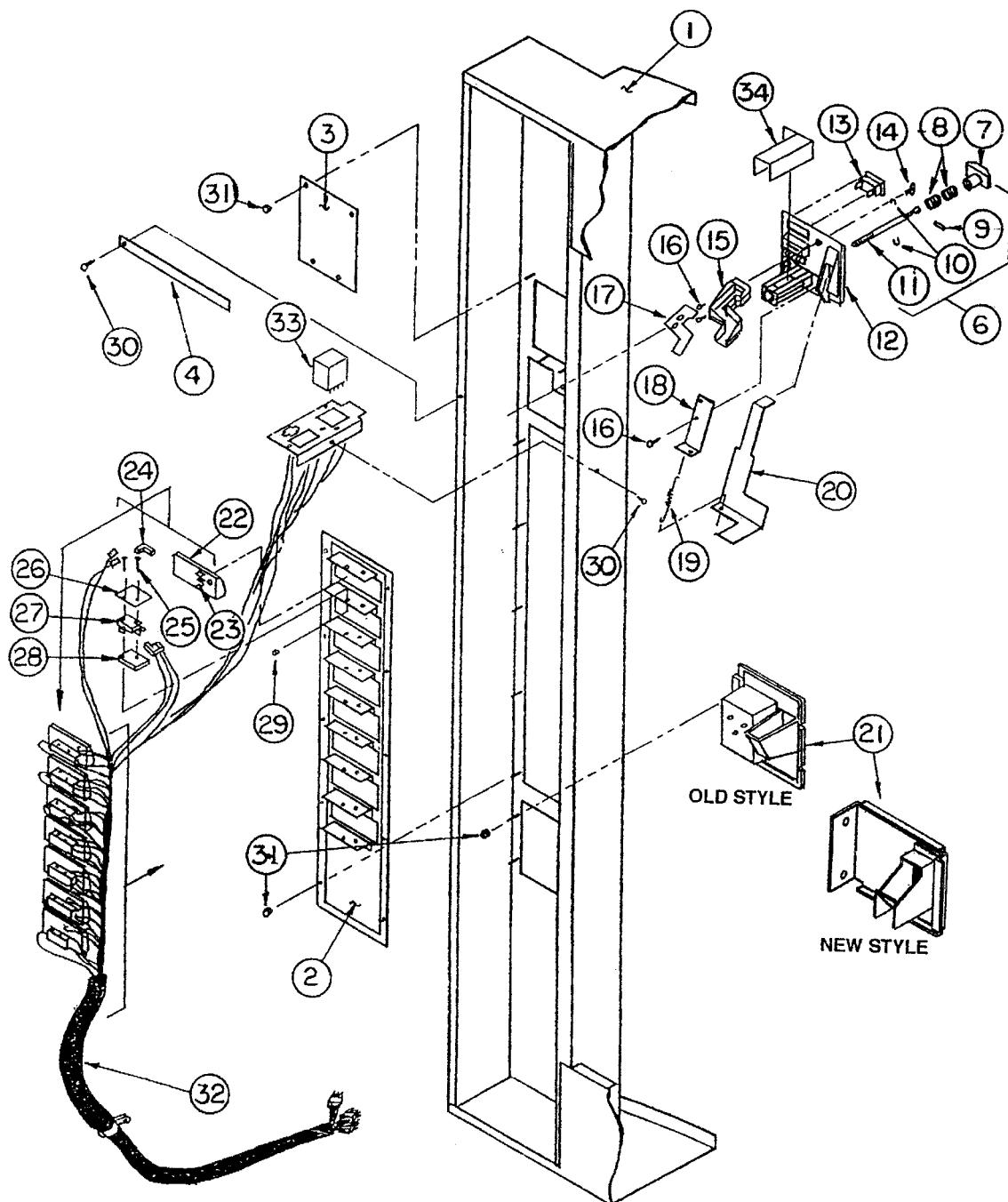


Pepsi / Cold Drink Main Door, Rear Assembly

ITEM NO.	DESCRIPTION	PART NO.
1	Door Weld Assembly, 79" (Pepsi)*	012520
	Door Weld Assembly, 79" (Cold Drink)*	020510
	Door Weld Assembly, 72" (Pepsi)*	013510
	Door Weld Assembly, 72" (Cold Drink)*	019510
2	Port Body W/A, PC / CD (Wide Round)	012560
3	Lamp Guard, Wide	012514
	Lamp Guard, Narrow	040501
4	Port Brace, Wide	010515
5	72" Slimline Lamp (for 79" vender)	841005
	64" Slimline Lamp (for 72" vender)	841006
6	Coin Box Housing	010537
7	Coin Box Welded Assembly	010580
8	Coin Hopper	815015
9	Changer Door	010544
	Changer Door Assembly	011580
10	Ballast Assembly, 79" (with Lampholders & Wire)	012591
	Ballast Assembly, 72" (with Lampholders & Wire)	013920
11	Lamp Bracket	010517
12	Top Lampholder	842003
13	Bottom Lampholder	842004
14	Changer Door Hinge, Top	010525
15	Changer Door Hinge, Bottom	010524
16	Bottom Hinge, Inner Door Hinge Assembly	010550
17	Latch Roller Bracket	010516
18	Latch Strike (for Inner Door)	812003
19	Screw, 1/4-20 x 1"	901003
20	Self-drilling Screw, #8-18 x 1/2"	902004
21	Carriage Bolt, 1/4-20 x 1/2"	901007
22	Nut, 1/4-20	905002
23	Screw, #8-32 x 3/8"	901011
24	Pop Rivet, 1/8"	908004
25	Bottom Coin Chute Assy., PC / CD (to Coin Box)	012593
26	Hopper Chute Assembly (to Coin Cup)	012538
27	Tie Rod, Door	811001
28	Elastic Stop Nut, #8-32	905004

* Denotes that a color must be specified.

Pepsi / Cold Drink Select Panel



Pepsi / Cold Drink Select Panel

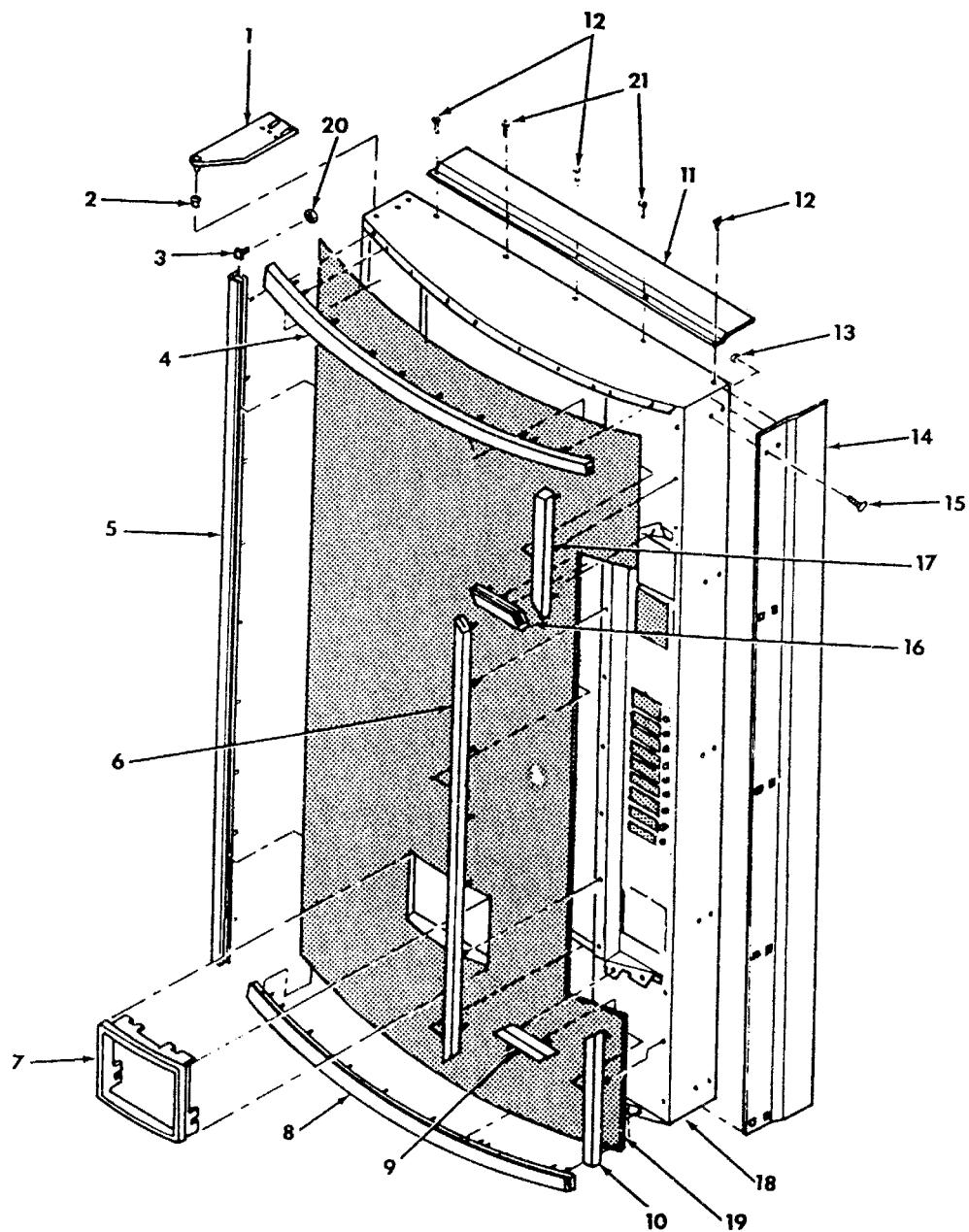
ITEM NO.	DESCRIPTION	PART NO.
1	Door Weld Assembly, 79" (Pepsi)*	012520
	Door Weld Assembly, 79" (Cold Drink)*	020510
	Door Weld Assembly, 72" (Pepsi)*	013510
	Door Weld Assembly, 72" (Cold Drink)*	019510
2	Control Panel Weld Assembly, 10-select*	017530
	Control Panel Weld Assembly, 8-select	012510
	Control Panel Weld Assembly, 7-select	034520
	Control Panel Weld Assembly, 6-select	040530
3	Validator Cover	012508
4	Panel Strap (optional)	010531
5	Relay Bracket (houses Changer & Relay Recept.)	010522
6	T-Handle Assembly	812001
7	T-Handle Body (all except Vandal Resistant Door)	812134
8	Spring	SEE NOTE #2
9	Pin, T-Handle	912133
10	Retainer Ring	SEE NOTE #2
11	T-Handle Stud	803006
12	Coin Insert	809006
13	Correct Change Lamp	841010
14	T-Screw, 8-32 x 3/4"	901001
15	Coin Chute	815001
16	Self-tapping Screw, #6-32 x 1/4"	901004
17	Coin Chute Cover	815002
18	Spring Plate	010511
19	Coin Return Spring	914003
20	Scavenger Link (Coin Return Lever)	810001
21	Coin Return Cup (old style, Lexan)	815003
22	Coin Cup Weld Assembly (new style, steel)	012595
23	Button Assembly (button front shown)	815025
24	Button Assembly (button rear shown)	815025
25	Sold Out Lamp	841009
26	Screw, #4-40 x 1"	901005
27	Spring Shield	815164
28	Switch, Large	835012
29	Switch Spacer	815018
30	Nut, #4-40	905003
31	Self-tapping Screw, #8-32 x 1/2"	901002
32	Nut, #8-32	905001
	Door Harness	SEE NOTE #1

* Denotes that a color must be specified.

NOTE #1: There are various parts. Please specify model and serial number at the time of order.

NOTE #2: This part is not available individually. It must be ordered as an assembly.

Vandal Resistant Door Trim



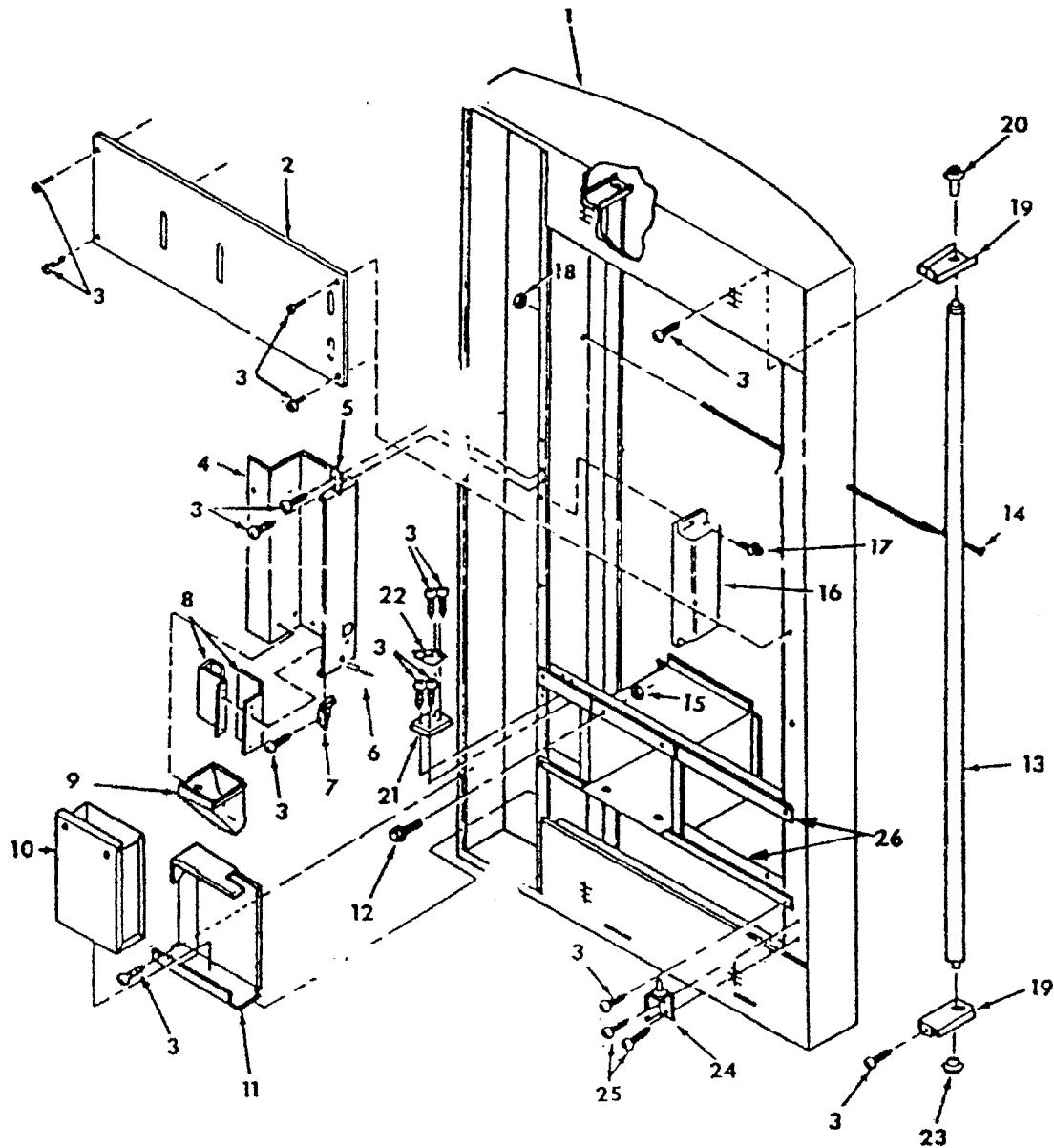
Vandal Resistant Door Trim

ITEM NO.	DESCRIPTION	PART NO.
1	Top Door Hinge	810002
2	Top Door Bushing	803003
3	T-Screw, #8-32	901001
4	Top Trim, Coke, 72" & 79" Wide	141552
5	Left Trim, Coke, 79"	141553
	Left Trim, Coke, 72"	142502
6	Right Insert Trim, Coke, 72" & 79" Wide	141556
7	Port Trim	815019
8	Bottom Trim, Coke, 72" & 79" Wide	141552
9	Bottom Insert Trim, Coke, 72" & 79" Wide	141558
10	Right Side Bottom Trim, Coke, 72" & 79" Wide	141555
11	Rain Guard, Wide Vendor	010518
	Rain Guard, Narrow Vendor	036503
12	Pop Rivet, 1/8"	908001
13	Nut, 1/4-20	905002
14	Right Vandal Panel, 79"*	010519
	Right Vandal Panel, 72"**	011501
15	Carriage Bolt, 1/4-20 x 1/2"	901007
16	Top Insert Trim, Coke, 72" & 79" Wide	141557
17	Right Side Top Trim, Coke, 79"	141554
	Right Side Top Trim, Coke, 72"	142503
18	Door Weld Assembly, Coke, 79"	141510
	Door Weld Assembly, Coke, 72" Wide	142510
19	Sign	SEE NOTE #1
20	Nut, #8-32	905001
21	Self-drilling Screw, #8 x 1/2"	902004

* Denotes that a color must be specified.

NOTE #1: There are various parts. Please specify model and serial number at the time of order.

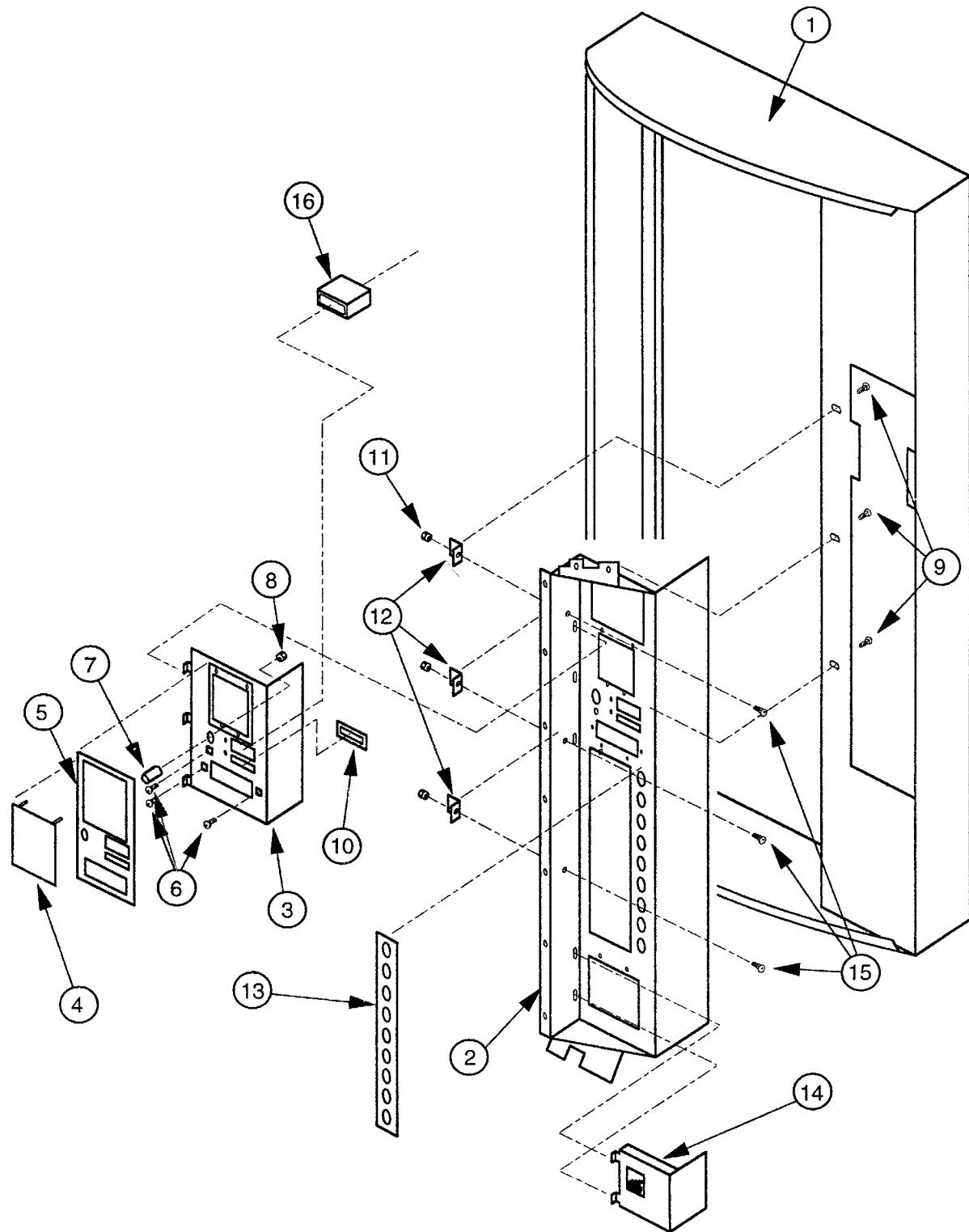
Vandal Resistant Door Rear Assembly



Vandal Resistant Door Rear Assembly

ITEM NO.	DESCRIPTION	PART NO.
1	Main Door Welded Assembly, 79" Wide	141510
	Main Door Welded Assembly, 72" Wide	142510
2	Lamp Guard, Wide Vendors	012514
	Lamp Guard, Narrow Vendors	040501
3	Screw, #8-32 x 3/8"	901011
4	Changer Door	010544
5	Changer Door Hinge, Top	010525
6	Pop Rivet, 1/8"	908004
7	Changer Door Hinge, Bottom	010524
8	Bottom Coin Chute Assembly (to Coin Box)	012593
9	Coin Hopper	815015
10	Coin Box Welded Assembly	010580
11	Coin Box Housing	010537
12	Carriage Bolt, 1/4-20 x 1/2"	901007
13	Lamp, High Output for 79" Vendors	841001
	Lamp, High Output for 72" Vendors	841002
14	Tie Rod	811001
15	Keps Nut, 1/4-20	905002
16	Ballast Assembly, 79" Wide Vendors	010950
	Ballast Assembly, 72" Wide Vendors	011930
17	Self-drilling Screw, #8-32	902004
18	Elastic Stop Nut	905004
19	Lamp Bracket	010517
20	Top Lampholder (Spring-loaded)	842001
21	Latch Roller Bracket	010516
22	Burst Open Latch Strike	812003
23	Bottom Lampholder	842002
24	Bottom Inner Door Hinge	010550
25	Self-tapping Screw, 1/4-20 x 1"	901003
26	Port Brace, Wide Vendors	010515
	Port Brace, Narrow Vendors	036502

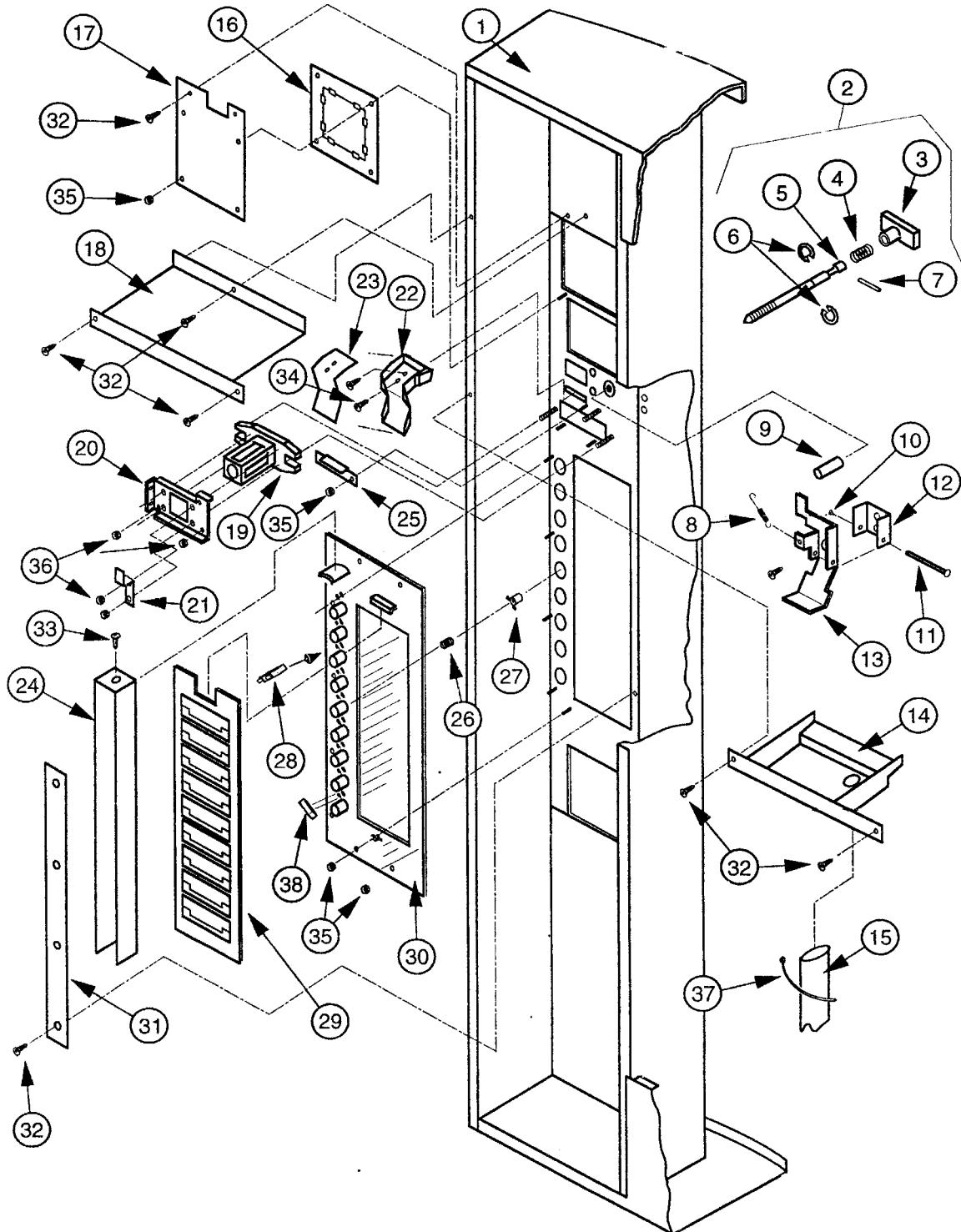
Vandal Resistant Door, Front



Vandal Resistant Door, Front

ITEM NO.	DESCRIPTION	PART NO.
1	Door Welded Assembly, Coke, 79"	141510
	Door Welded Assembly, Coke, 72"	142510
2	Control Panel, Coke, 6-select	145510
	Control Panel, Coke, 7-select	141502
	Control Panel, Coke, 9-select	143510
3	Security Plate Welded Assembly	141550
4	Validator Cover, Coke	010535
5	Security Plate Decal, Non-electronic	845397
6	T-Bolt, 1/4-20 x 1"	901037
7	Bushing, Button Coin Return	803030
8	Hex Jam Nut, 9/16-18 UNF2A	905019
9	Screw, #8-32 x 3/8"	901011
10	Coin Plate, Coke	141516
11	Keps Nut, 1/4-20	905002
12	Hold Down Angle	123505
13	Decal, Select Button	845383
14	Coin Cup Mounting Plate Welded Assembly	123550
15	Carriage Bolt, 1/4-20 x 1/2"	901007
16	Correct Change Lamp	841010

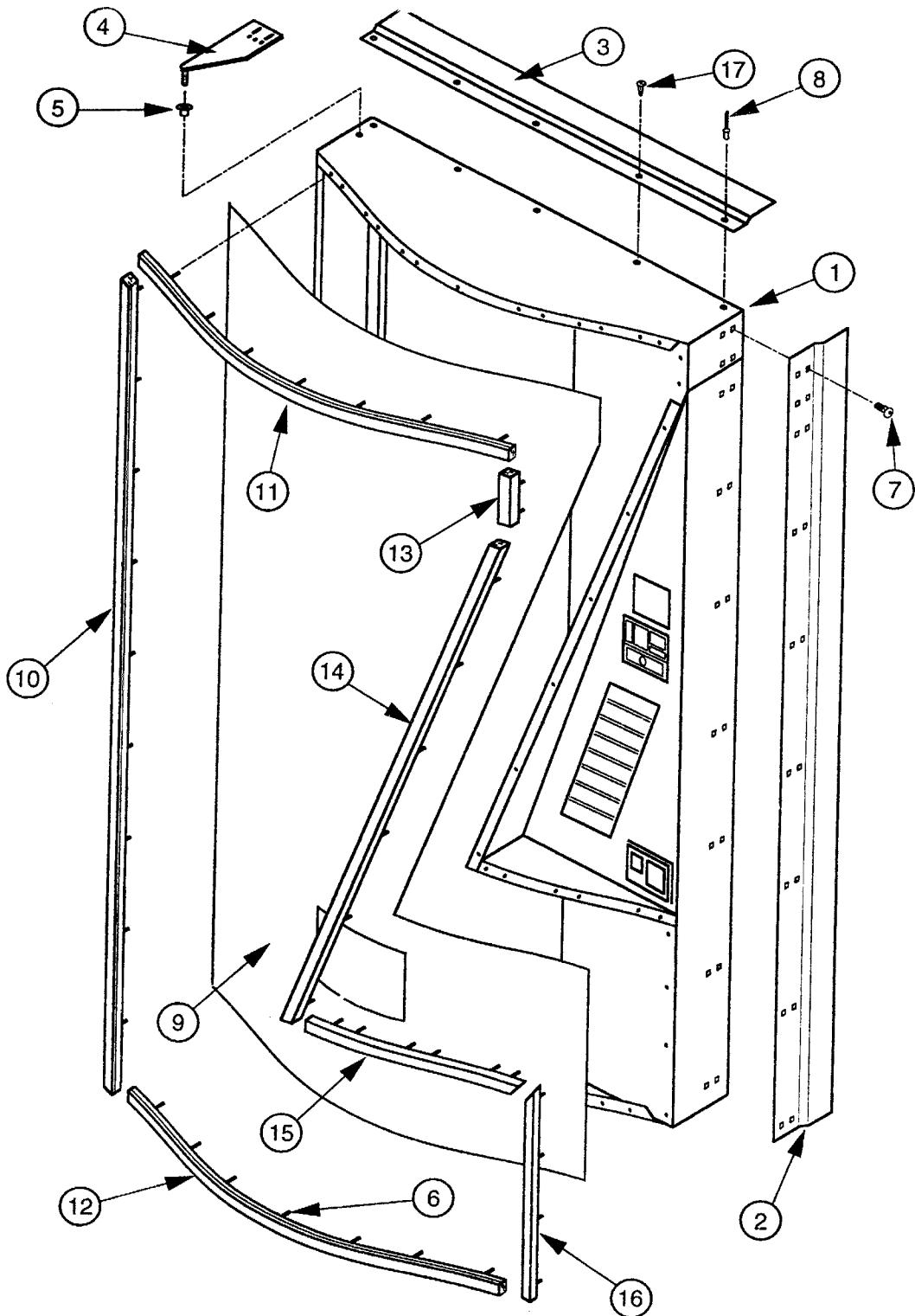
Vandal Resistant Door, Rear



Vandal Resistant Door, Rear

ITEM NO.	DESCRIPTION	PART NO.
1	Door Welded Assembly, Coke, 79"	141510
	Door Welded Assembly, Coke, 72"	142510
2	Flush Mount "Pop-Out" T-Handle Assembly	812176
3	Flush Mount T-Handle Body	N/A
4	Spring	N/A
5	T-Handle Stud	N/A
6	Retaining Ring	N/A
7	Pin / T-Handle Stud	N/A
8	Sold Out Spring	914003
9	Button, Coin Return Lever	803031
10	Retaining Ring, 5/32	906005
11	Roller Pin, Door Lifter	811002
12	Hinge, Coin Return Lever	141506
13	Coin Return Lever	141504
14	Catch Basin, Bill Validator	095509
15	Catch Basin, Drain Tube	825038
16	POS Window, Coke	815007
17	POS Window Plate	123503
18	Security Shelf	141512
19	T-Handle Housing	812190
20	T-Handle Brace	141513
21	Lever Stop	141514
22	Coin Chute	815001
23	Coin Chute Cover	815002
24	Splash Guard, Coke	815169
25	Coin Ramp	141508
26	Spring, Select Button	914004
27	Select Button, Coke	815165
28	Switch, Miniature	835009
29	Carrier Strip Assembly	815167
30	Button Panel	815168
31	Retaining Strap	141507
32	Screw, #8-32 x 3/8"	901011
33	Self-drilling Screw, #8 x 1/2"	902001
34	Screw, #6-32 x 3/8"	901004
35	Nut, #8-32	905001
36	Nut, 1/4-20	905002
37	Wire Tie, Large (4")	916008
38	Sold Out Lamp	841009

Dr. Pepper Main Door Assembly, Front



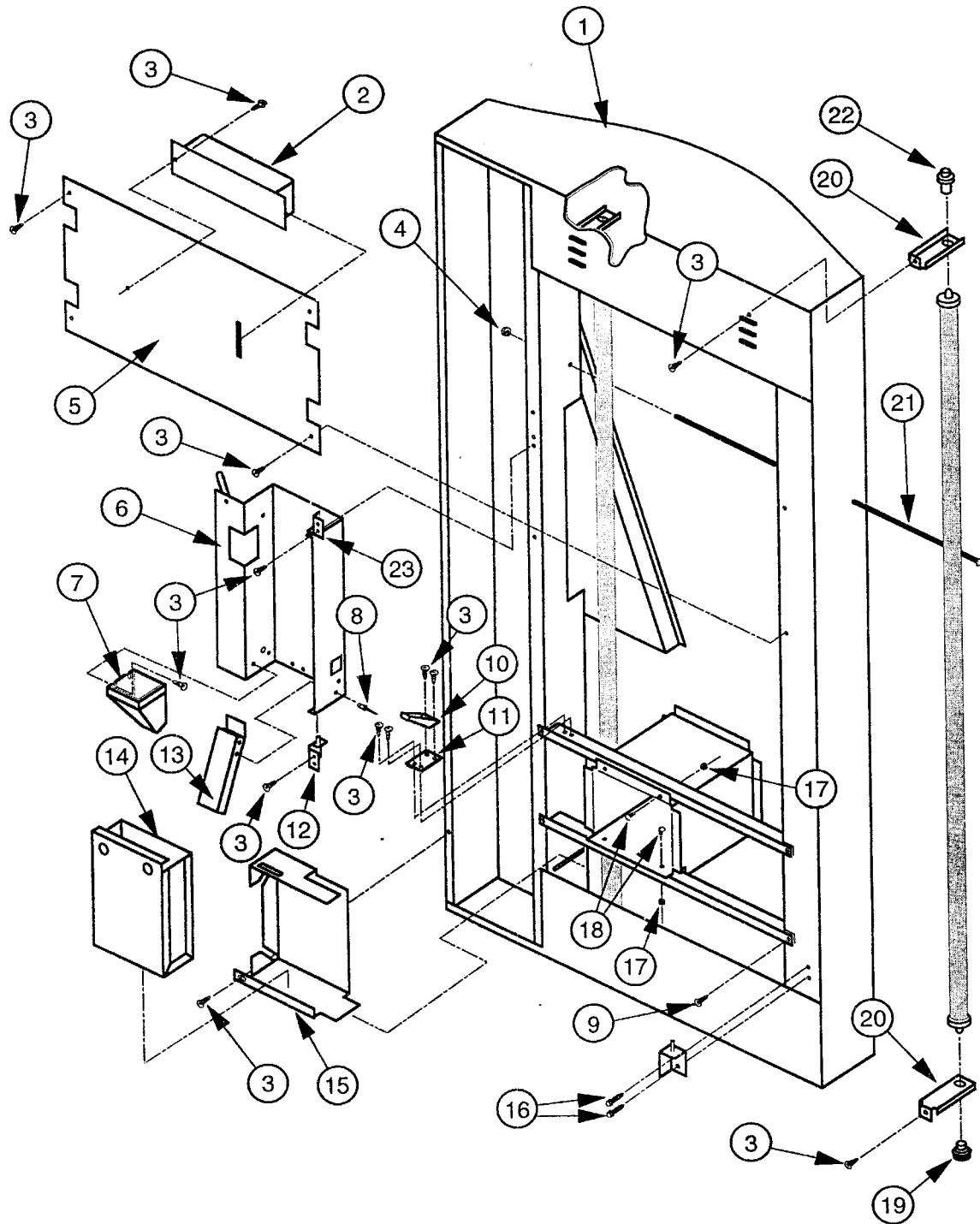
Dr. Pepper Main Door Assembly, Front

ITEM NO.	DESCRIPTION	PART NO.
1	Main Door Welded Assembly, Dr. Pepper, 79"*	100510
	Main Door Welded Assembly, Dr. Pepper, 72"*	101510
2	Right Vandal Panel, 79"*	010519
	Right Vandal Panel, 72"*	011501
3	Rain Guard, Wide	010518
4	Top Hinge, Left	810002
5	Nyliner, 1/2"	916012
6	T-Screw, #8-32 x 3/4"	901001
7	Carriage Bolt, 1/4-20 x 1/2"	901007
8	Pop Rivet, 1/8"	908004
9	Sign	SEE NOTE #1
10	Trim, Dr. Pepper, 79", Vertical Left Side	141553
	Trim, Dr. Pepper, 72", Vertical Left Side	019507
11	Trim, Dr. Pepper, 79", Top & Bottom	141552
	Trim, Dr. Pepper, 72", Top	101502
12	Trim, Dr. Pepper, 79" & 72", Bottom	141552
13	Trim, Vertical Top Right Side (79" Vendor only)	100518
14	Trim, Dr. Pepper, 79", Control Panel Side	100517
	Trim, Dr. Pepper, 72", Control Panel Side	101503
15	Trim, Dr. Pepper, 79" & 72", Bot. Cont. Pnl. Side	100516
16	Trim, Dr. Pepper, 79" & 72", Vert. Bot. Right Side	100515
17	Self-drilling Screw, #8 x 1/2"	902004

* Denotes that a color must be specified.

NOTE #1: There are various parts. Please specify model and serial number at the time of order.

Dr. Pepper Main Door Assembly, Rear

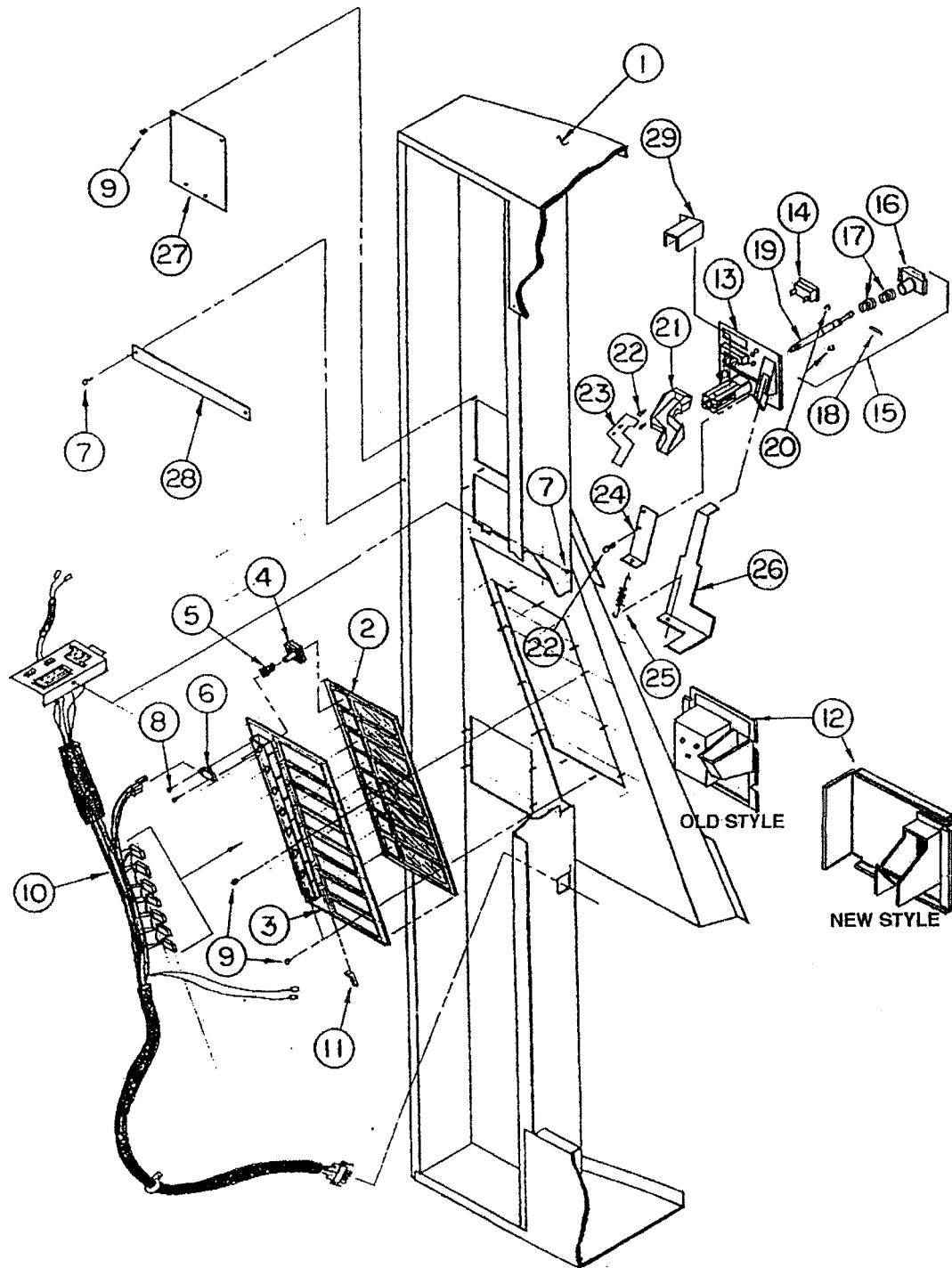


Dr. Pepper Main Door Assembly, Rear

ITEM NO.	DESCRIPTION	PART NO.
1	Main Door Welded Assembly, Dr. Pepper, 79"*	100510
	Main Door Welded Assembly, Dr. Pepper, 72"*	101510
2	High Output Ballast Assembly, 79"	100930
	High Output Ballast Assembly, 72"	101910
3	Screw, #8-32 x 1/2"	901002
4	Elastic Stop Nut, #8-32	905004
5	Lamp Guard, Wide	012514
6	Changer Door	010544
	Changer Door Assembly	011580
7	Coin Hopper	815015
8	Pop Rivet, 1/8"	908004
9	Self-drilling Screw, #8-18 x 1/2"	902004
10	Latch Strike (for Inner Door)	812003
11	Latch Roller Bracket	010516
12	Changer Door Hinge, Bottom	010524
13	Bottom Coin Chute Assembly	010594
14	Coin Box Weld Assembly	010580
15	Coin Box Housing	010537
16	Screw, 1/4-20 x 1"	901003
17	Nut, 1/4-20	905002
18	Carriage Bolt, 1/4-20 x 1"	901007
19	Bottom Lampholder, High Output	842002
20	Lamp Bracket	010517
21	Tie Rod, Door	811001
22	Top Lampholder, High Output	842001
23	Changer Door Hinge, Top	010525

* Denotes that a color must be specified.

Dr. Pepper Select Panel Assembly (Regular)



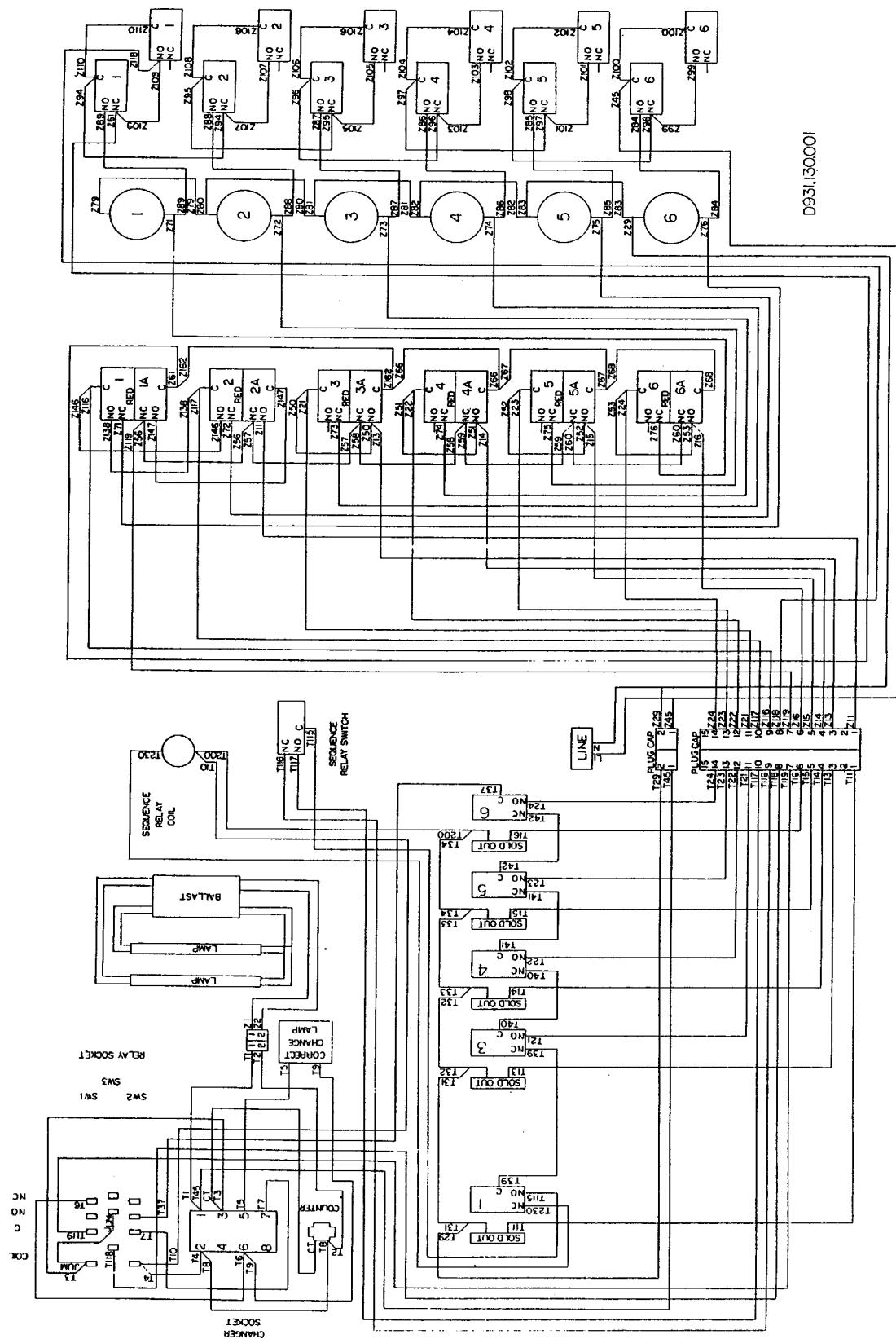
Dr. Pepper Select Panel Assembly (Regular)

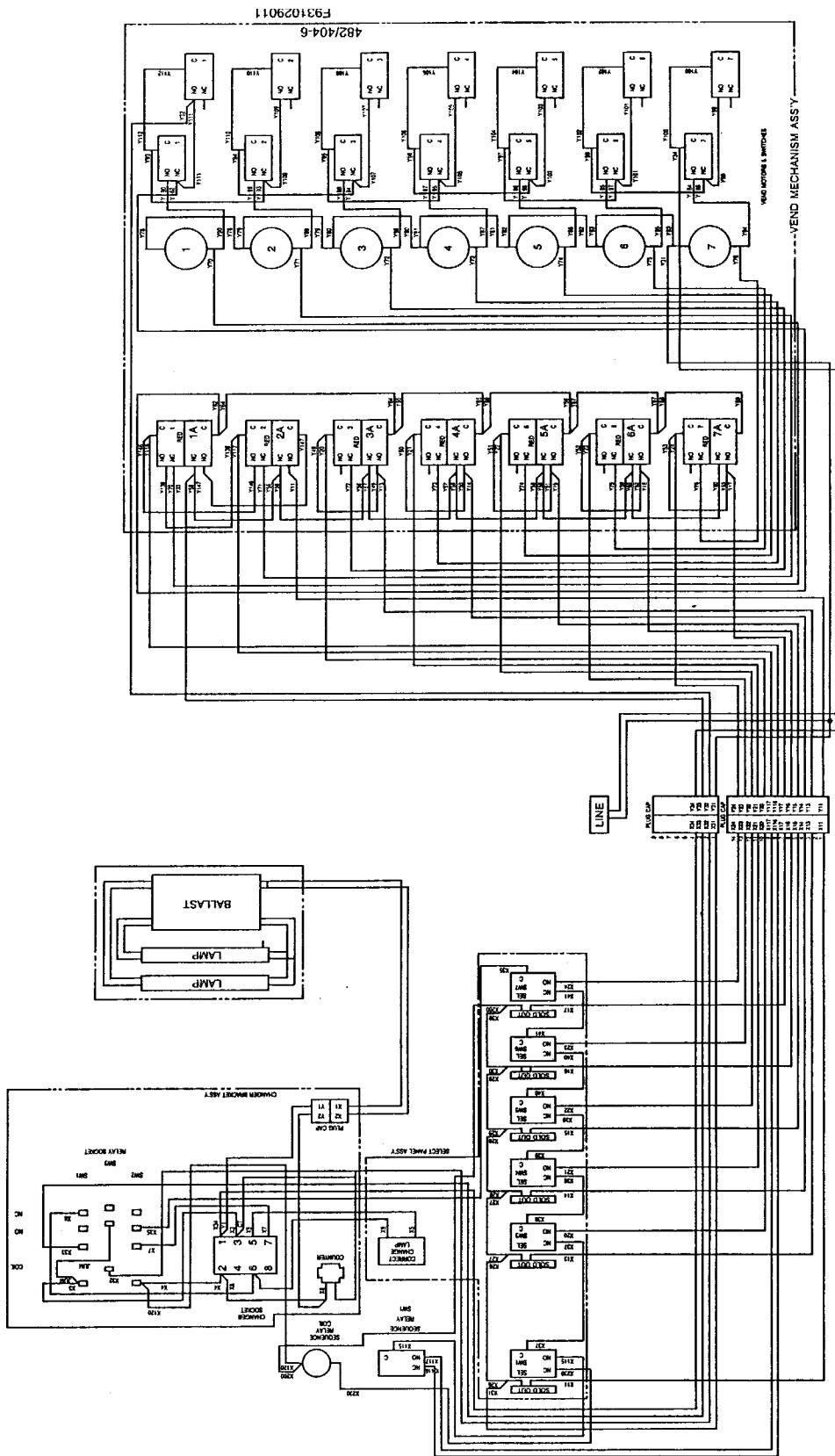
ITEM NO.	DESCRIPTION	PART NO.
1	Main Door Welded Assembly, Dr. Pepper, 79"*	100510
	Main Door Welded Assembly, Dr. Pepper, 72"**	101510
2	Control Panel, Dr. Pepper, Front - 10-select	815086
	Control Panel, Dr. Pepper, Front - 8-select	815071
	Control Panel, Dr. Pepper, Front - 6-select	815088
3	Control Panel, Dr. Pepper, Rear - 10-select	815087
	Control Panel, Dr. Pepper, Rear - 8-select	815072
	Control Panel, Dr. Pepper, Rear - 6-select	815089
4	Select Button, Dr. Pepper	815073
5	Button Spring, Dr. Pepper	914020
6	Switch, Miniature	835001
7	Self-drilling Screw, #8-18 x 1/2"	902004
8	Screw, #4 x 5/8"	902009
9	Nut, #8-32	905001
10	Main Door Harness	SEE NOTE #1
11	Sold Out Lamp	841009
12	Coin Return Cup (old style, Lexan)	815003
	Coin Return Cup Welded Assembly (1218 & after)	100560
13	Coin Insert	809006
14	Correct Change Lamp	841010
15	T-Handle Assembly	812001
16	T-Handle Body	812134
17	Spring	SEE NOTE #2
18	Pin, T-Handle	SEE NOTE #2
19	T-Handle Stud	803006
20	Retainer Ring	906005
21	Coin Chute	815001
22	Self-tapping Screw, #6-32 x 1/4"	901004
23	Coin Chute Cover	815002
24	Spring Plate	010511
25	Coin Return Spring	914003
26	Scavenger Link (Coin Return Lever)	810001
27	Validator Cover	012508
28	Panel Strap (optional)	010531
29	Lock Cylinder Cover	161532

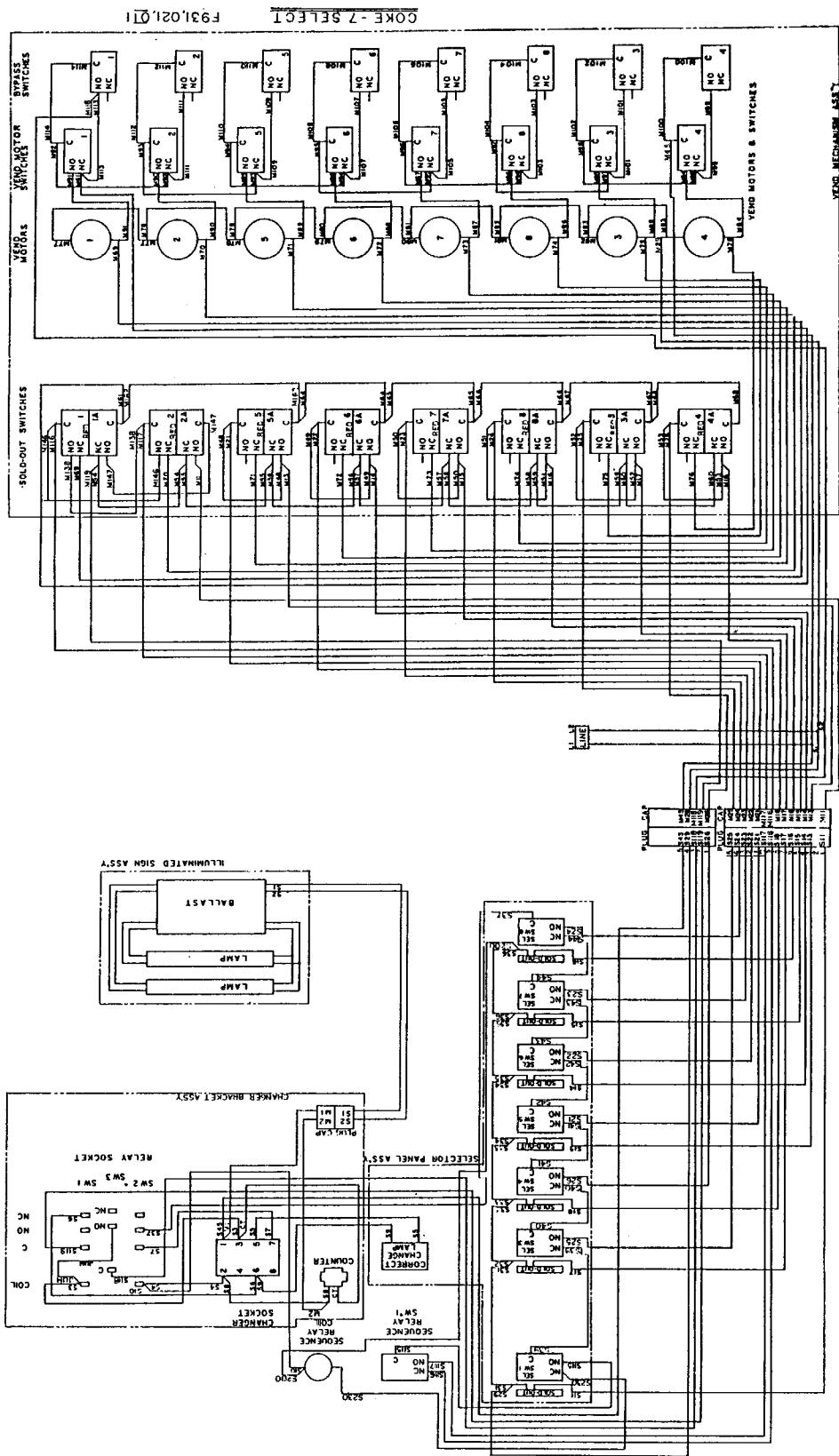
* Denotes that a color must be specified.

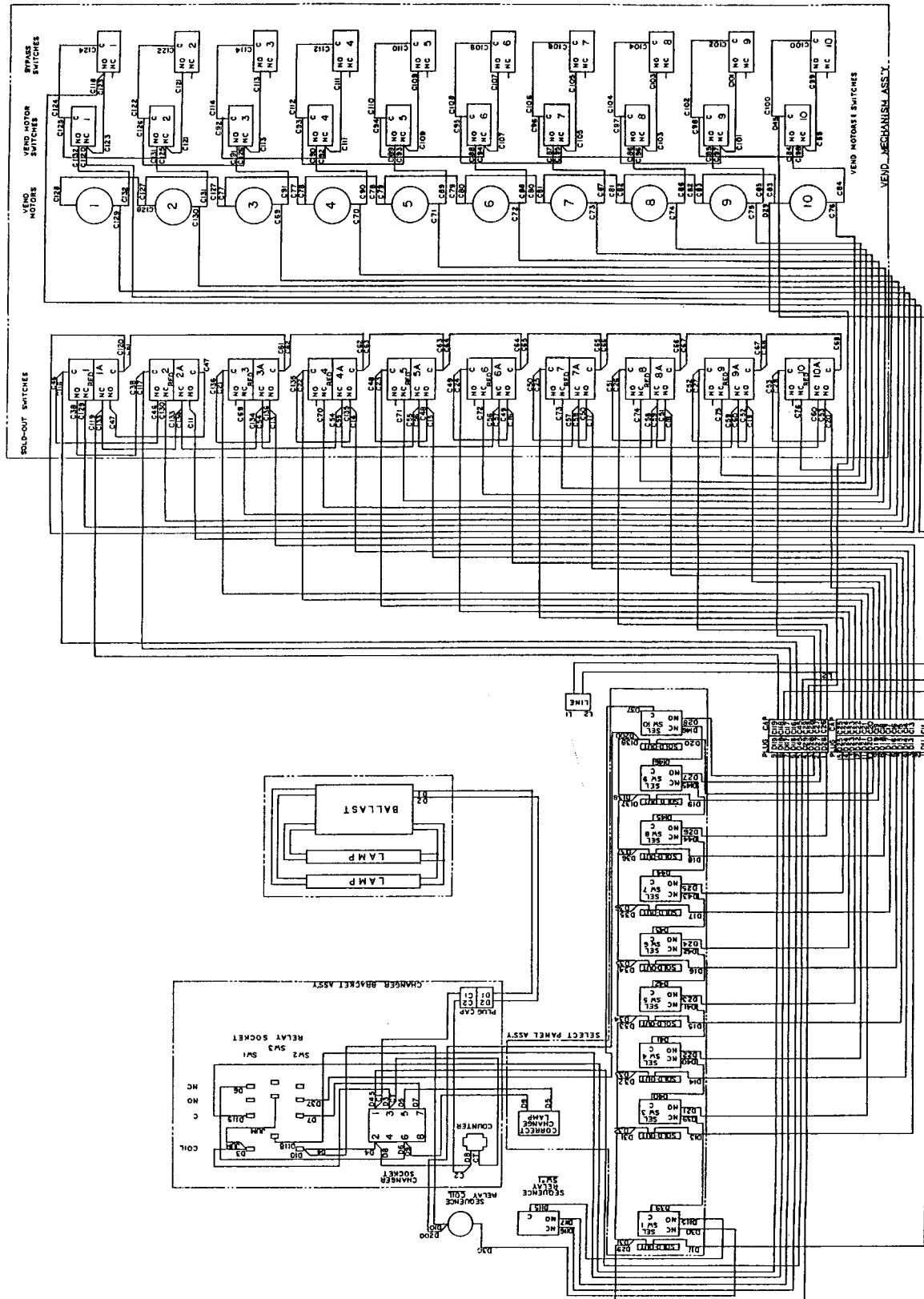
NOTE #1: There are various parts. Please specify model and serial number at the time of order.

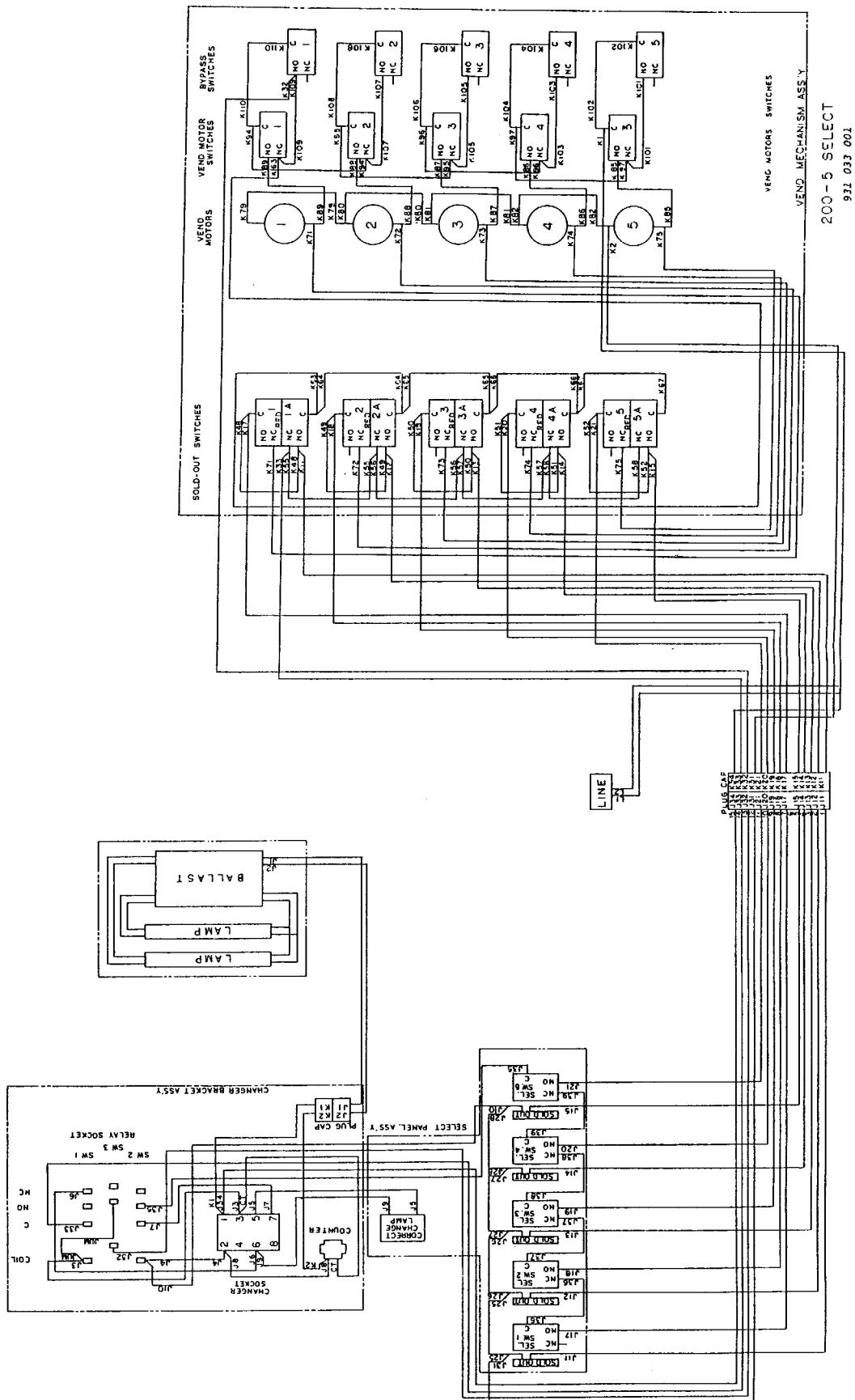
NOTE #2: This part is not available individually. It must be ordered as an assembly.

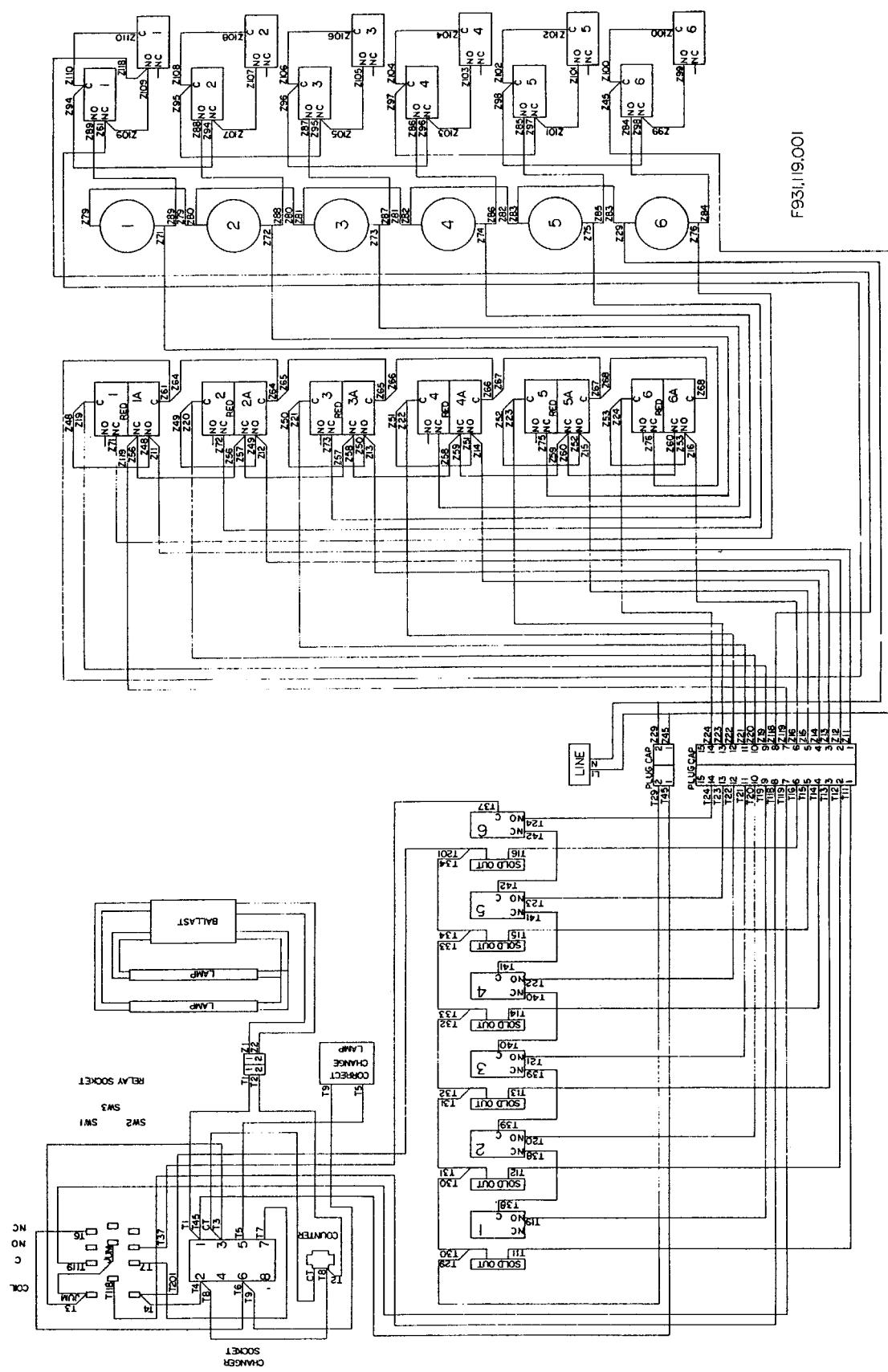


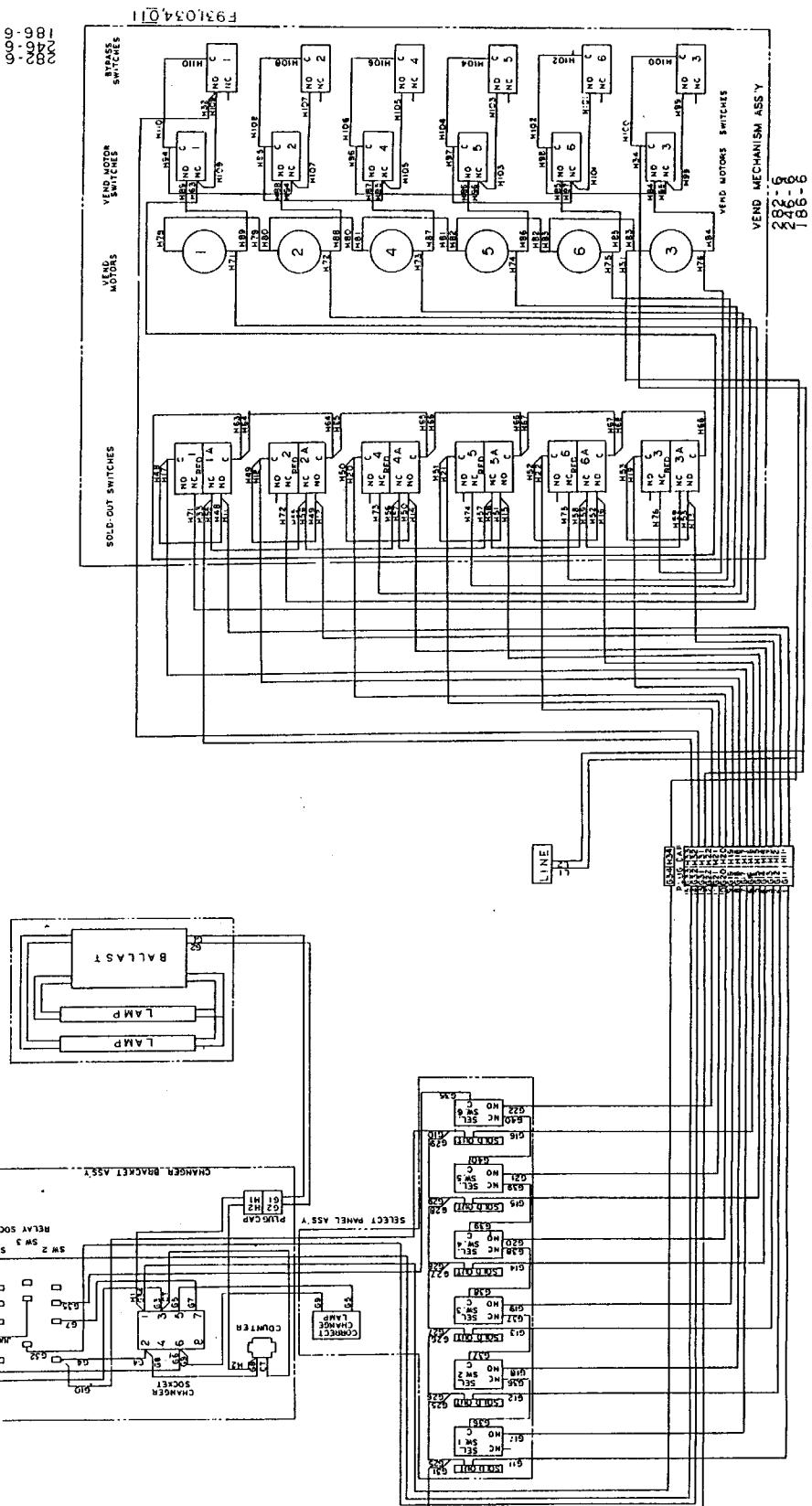


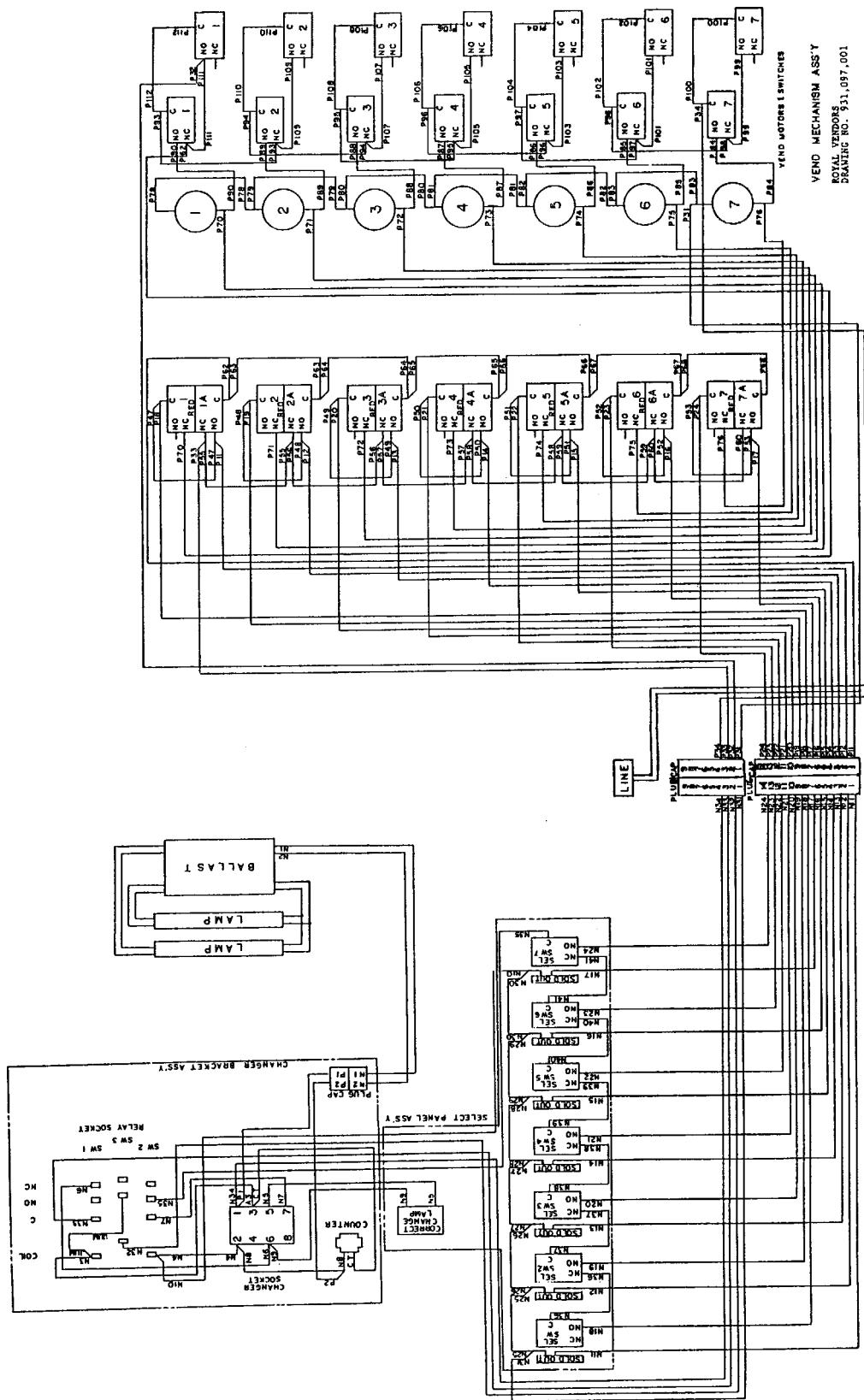


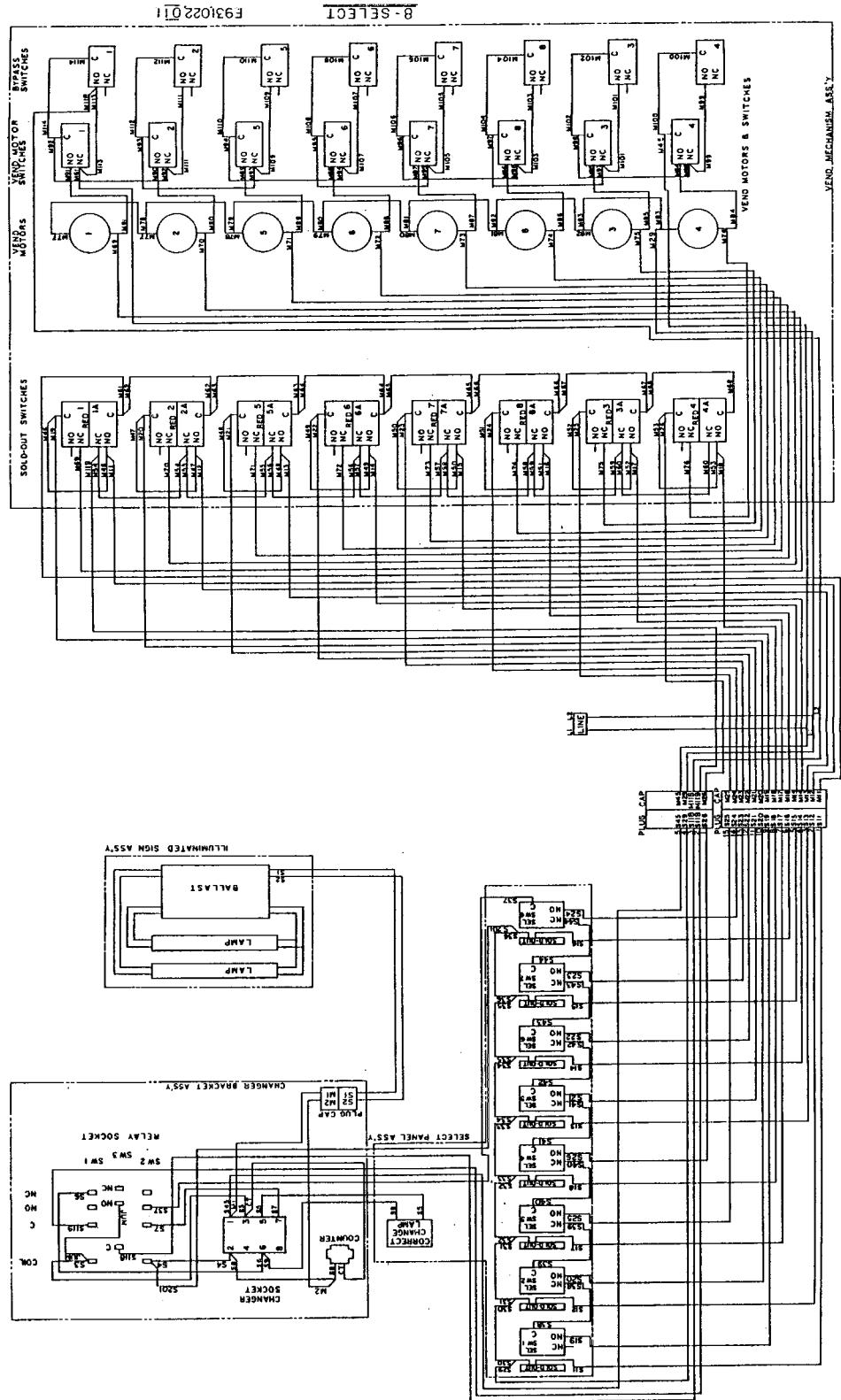


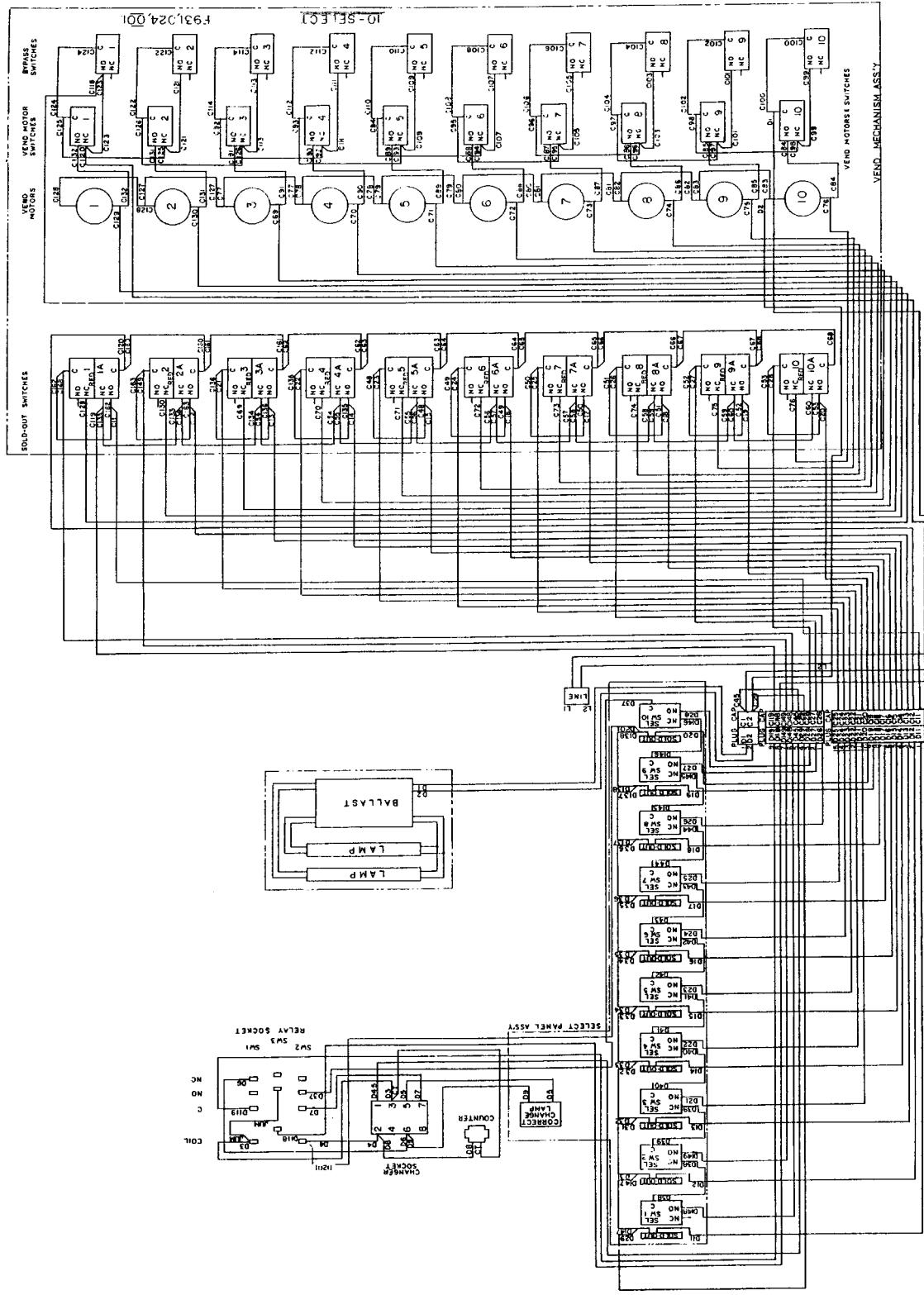














*Made in the
United States of America*



Royal Vendors' Publication
010127
Rev. D 7-03